COMPO-85A

MUSIC CENTER MW/LW/FM
STEREO TUNER & DOUBLE
CASSETTE RECORDER
COMPACT DISC PLAYER.

TENSAI
INTERNATIONAL

Service Manual

182

TABLE OF CONTENTS

	Page
TABLE OF CONTENTS	2
SAFETY PRECAUTIONS	3
IMPORTANT FOR LASER PRODUCTS	4
CAUTION FOR ELECTROSTATIC BREAKDOWN	5
DIAL CORD STRINGING	6
DISASSEMBLY INSTRUCTIONS	7–8
CONTROL LOCATION	9
ALIGNMENT PROCEDURE – AUDIO SECTION	10–15
BLOCK DIAGRAM – AUDIO SECTION	16
SCHEMATIC DIAGRAM – AUDIO SECTION	17
WIRING DIAGRAM – AUDIO SECTION	18
P.C. BOARD ASS'Y – AUDIO SECTION	19–20
IC LEAD IDENTIFICATION – CD SECTION	21–23
HOW TO CHANGE THE LASER PICK-UP	24
ALIGNMENT PROCEDURE – CD SECTION	25–29
BLOCK DIAGRAM – CD SECTION	30
SCHEMATIC DIAGRAM – CD SECTION	31
WIRING DIAGRAM – CD SECTION	32
P.C. BOARD ASS'Y – CD SECTION	33–34
CASSETTE DECK EXPLODED VIEW	35
PARTS LIST – CASSETTE DECK EXPLODED VIEW	36–37
CD DECK EXPLODED VIEW	38
PARTS LIST – CD DECK EXPLODED VIEW	39
CABINET EXPLODED VIEW	40
PARTS LIST – CABINET EXPLODED VIEW	41–43
PLAYER EXPLODED VIEW	44
PARTS LIST – PLAYER EXPLODED VIEW	45
ELECTRICAL PARTS LIST – AUDIO SECTION	46–50
ELECTRICAL PARTS LIST – CD SECTION	51–55

SAFETY PRECAUTIONS

1. SAFETY PRECAUTIONS
Before returning an instrument to the customer, always make a safety check of the entire instrument, including, but not limited to, the following items:

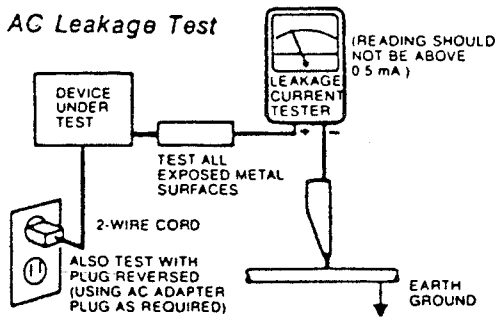
a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing.

(1) Protective shields are provided to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience.

(2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulation fishpapers, adjustment and compartment covers/shields, and isolated resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning.**

b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, excessively wide cabinet ventilation slots, and an improperly fitted and/or incorrectly secured cabinet back cover.

c. **Leakage Current Hot Check** — With the instrument completely reassembled, plug the AC line cord directly into a 220V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 "Leakage Current for Appliances" and Underwriters Laboratories (UL) 1270. (34.6). With the instrument AC switch first in the ON position and then in the OFF position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screwheads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat test. **ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER.**

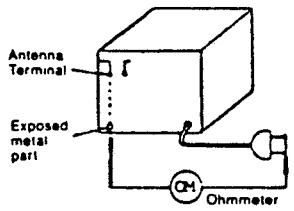

AC Leakage Test
(READING SHOULD NOT BE ABOVE 0.5 mA)
LEAKAGE CURRENT TESTER
DEVICE UNDER TEST
TEST ALL EXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

d. **Insulation Resistance Test Cold Check**

(1) Unplug the power supply cord and connect a jumper wire between the two prongs of the plug.

(2) Turn on the power switch of the instrument.

(3) Measure the resistance with an ohmmeter between the jumpered AC plug and each **exposed metallic** cabinet part on the instrument, such as screwheads, antenna, control shafts, handle brackets, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1 and 5.2 Megohm. When there is no return path to the chassis, the reading must be "infinite". If it is not within the limits specified, there is the possibility of a shock hazard, and the instrument must be repaired and rechecked before it is returned to the customer.



2. PRODUCT SAFETY NOTICE
Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a (⚠) on schematics and parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. Products Safety is under review continuously and new instructions are issued whenever appropriate.

3. SERVICING PRECAUTIONS
CAUTION: Before servicing instruments covered by this service manual and its supplements, read and follow the SAFETY PRECAUTIONS on this page. NOTE: If unforeseen circumstances created conflict between the following servicing precautions and any of the safety precautions, **always follow the safety precautions.** Remember: Safety First.

General Servicing Precautions

a. Always unplug the instrument AC power cord from the AC power source before:

(1) removing or reinstalling any component, circuit board, module, or any other instrument assembly.

(2) disconnecting or reconnection any instrument electrical plug or other electrical connection.

(3) connecting a test substitute in parallel with an electrolytic in the instrument.

Caution: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

b. Do **not** defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.

c. Do **not** apply AC power to this instrument and/or any of its electrical assemblies unless **all** solid-state device heat sinks are correctly installed.

d. Always connect a test instrument's ground lead to the instrument chassis ground **before** connecting the test instrument positive lead. Always remove the test instrument ground lead last.

ELECTROSTATICALLY SENSITIVE (ES) DEVICES:

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed. CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precaution.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

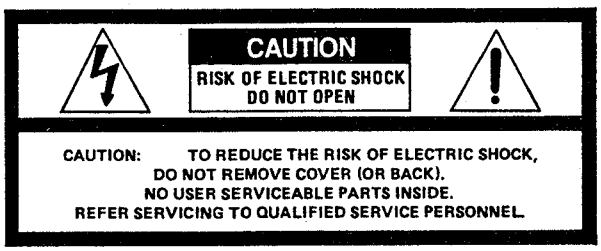
IMPORTANT FOR LASER PRODUCTS

PRECAUTIONS

1. CLASS 1 LASER PRODUCT
2. DANGER: Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION: Do not open the rear cover. There are no user serviceable parts inside the unit, leave all servicing to qualified service personnel.
4. CAUTION: The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the disc holder is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION: Use of controls of adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to consitute a risk of electric shock to persons.

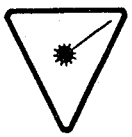
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

LASER SAFETY

This unit employs a laser. Only a qualified service person should remove the cover or attempt to service this device, due to possible eye injury.

"CAUTION— USE OF CONTROLS, ADJUSTMENTS OR PERFORMANCE, OF PROCEDURE OTHER THAN SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE."

DANGER: INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK FAILED OR DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.



CAUTION: HAZARDOUS LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED.

ATTENTION: RAYONNEMENT LASER DANGEREUX SI OUVERT AVEC L'ENCLENCHEMENT DE SECURITE ANNULE.

CAUTION FOR ELECTROSTATIC BREAKDOWN

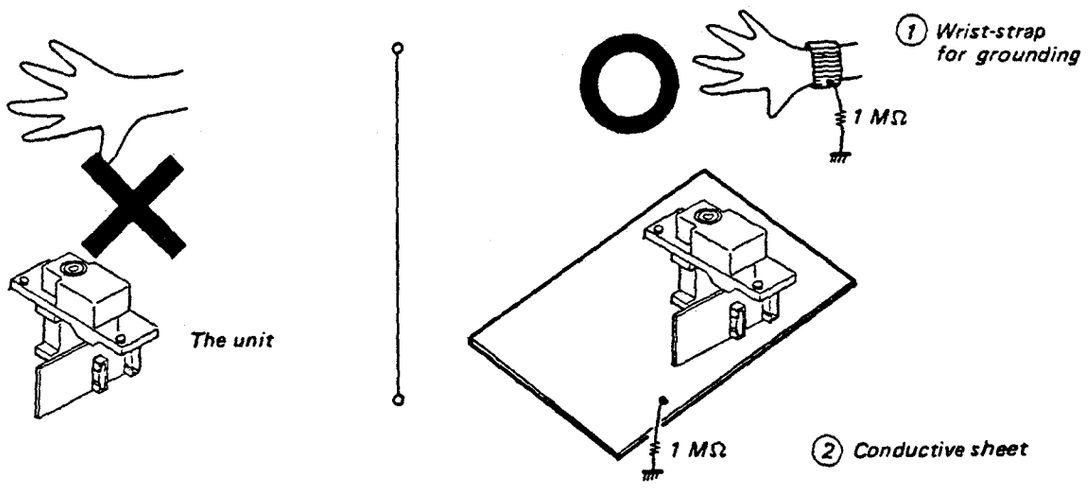
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
The printed matter below is included in the repair parts. During repair, use the procedure in the printed matter.
The flexible board is easily damaged and should be handled with care.
The following method is an example for reference purposes:

1. Place a conductive sheet on the workbench. (The black sheet used as repair parts wrapping).
2. Place the set on the conductive sheet so that the chassis touches the sheet. (This makes it the same potential as the conductive sheet).
3. Place your hands on the .conductive sheet. (This makes them the same potential as the sheet).
4. Remove the optical pick-up block.
5. Perform work on top of the conductive sheet. Be careful that clothing does not touch the optical pick-up block.

Printed Matter Included in the Repair Parts

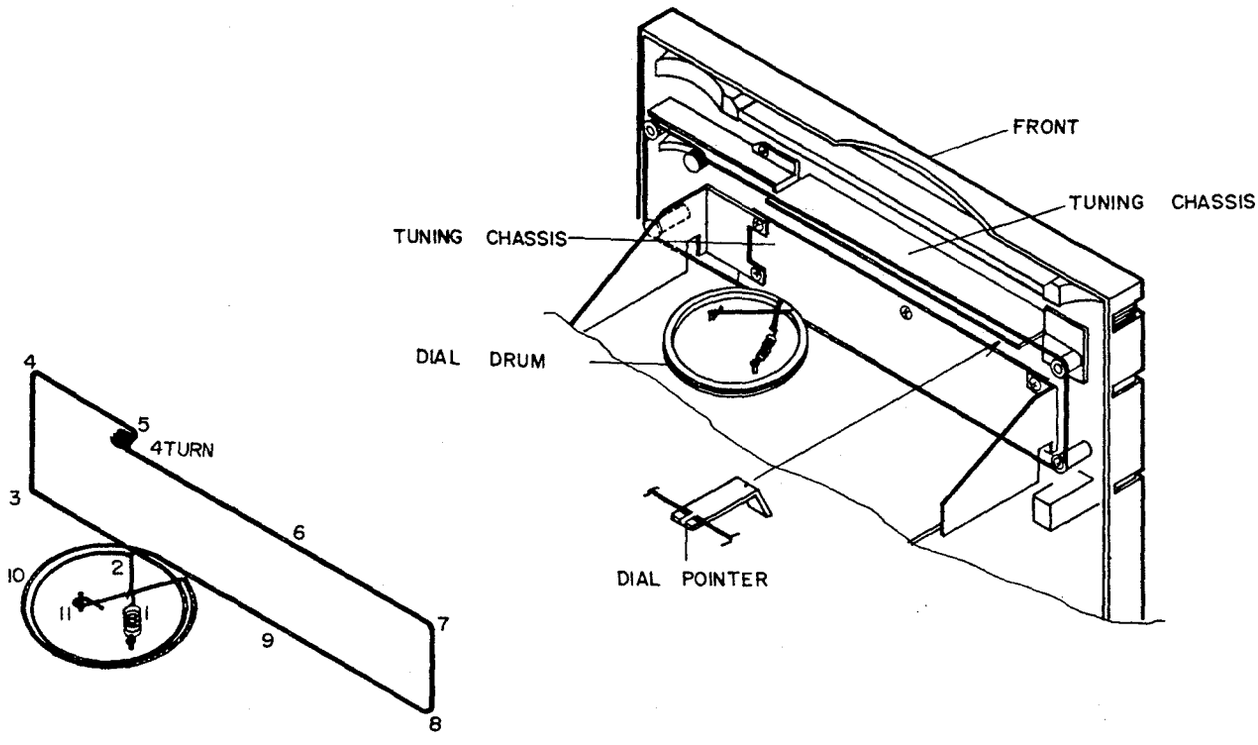
When opening or repairing the unit, the procedure for grounding as follows is required to prevent damage caused by static electricity.

1. Grounding for the human body.
   Be sure to put on a wrist-strap for grounding (with impedance lower than $10^8\ \Omega$) whose other end is grounded. The strap works to drain away the static electricity build-up on the human body.
2. Grounding for the work table.
   Be sure to lay on the table a conductive sheet (with impedance lower than $10^9\ \Omega$) such as sheet of copper, which is grounded.
3. As static electricity build-up on clothes is not drainded away, be careful not to let your clothes touch the unit.



DIAL CORD STRINGING

1. Dial string length 1400mm.
2. Arrows 1-11 show the correct order and direction to run dial string.



DISASSEMBLY INSTRUCTIONS

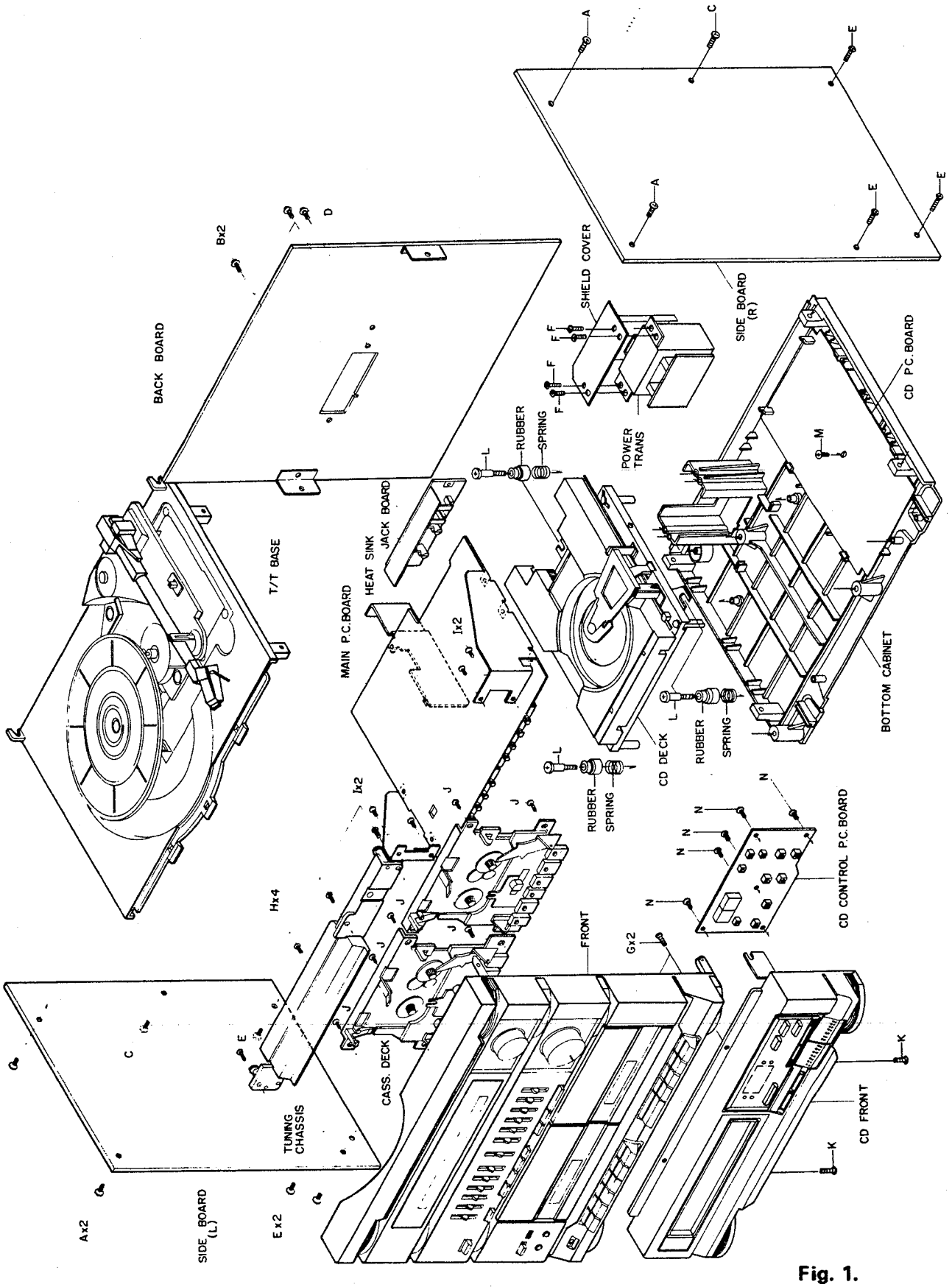
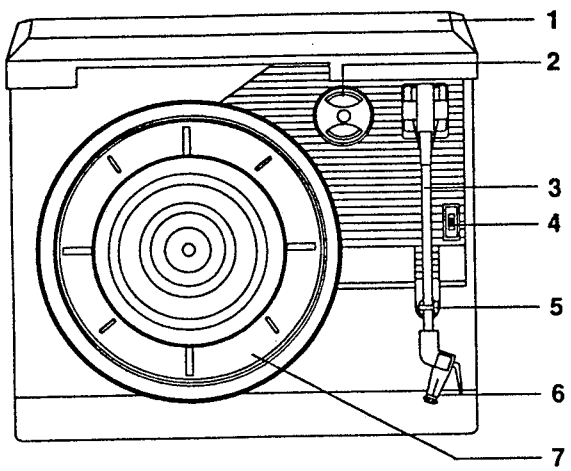
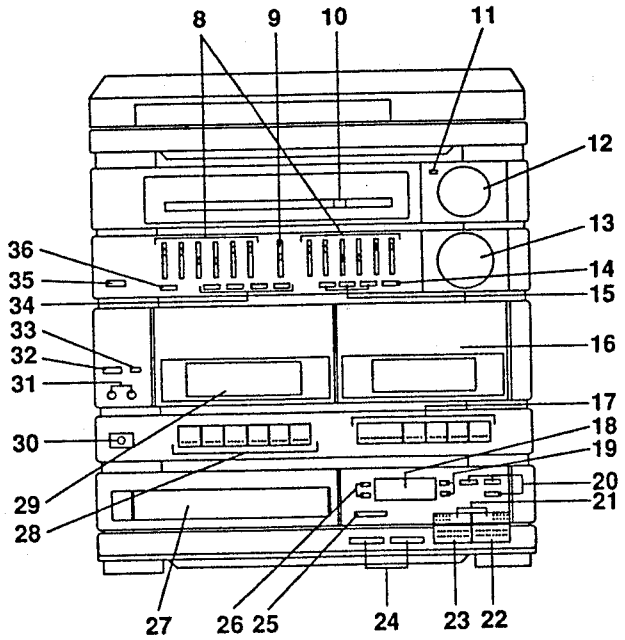


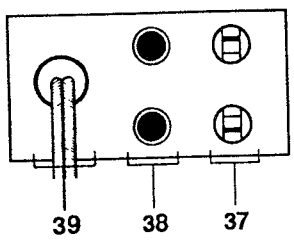
Fig. 1.

1. Remove 4 screws "A" fastening SIDE BOARDS and pull over T/T BASE.
2. Before removing BACK BOARD, remove one screw connected with FM WIRE ANT and 5 screws "B", "C" and "D".
3. Remove 6 screws "E" fastening SIDE BOARDS and remove BACK BOARD from MAIN UNIT.
4. Remove 4 screws "F" fastening POWERTRANS FORMER and remove POWERTRANS FORMER from BOTTOM CABINET.
5. Remove 2 screws "G" fastening CD FRONT and then remove CD FRONT from MAIN UNIT.
6. Remove 4 screws "H" fastening TUNNING CHASSIS and remove TUNNING CHASSIS from FRONT CABINET.
7. Remove 4 screws "I" fastening MAIN P.C. BOARD and remove MAIN P.C. BOARD from FRONT CABINET.
8. Remove 6 screws "J" fastening CASSETTE DECK and remove CASSETTE DECK.
9. Remove 2 screws "K" fastening BOTTOM CABINET and remove BOTTOM CABINET from CD FRONT.
10. Remove 3 screws "L" fastening CD DECK and remove CD DECK from BOTTOM CABINET. (NOTES: Take care of losing RUBBER and SPRING.)
11. Remove one screw "M" fastening CD P.C. BOARD and remove CD P.C. BOARD from BOTTOM CABINET.
12. Remove 5 screws "N" fastening CD CONTROL P.C. BOARD and remove CD CONTROL P.C. BOARD from CD FRONT.

CONTROL LOCATION







PHONO

1. Dust Cover
2. 45 RPM Adaptor
3. Tonearm
4. Speed Selector
5. Tonearm Rest
6. Stylus/Cartridge
7. Turntable Platter
8. Graphic Equalizer Controls
9. Balance Control
10. Dial Pointer
11. FM Stereo Indicator
12. Tuning Control
13. Volume Control
14. Mono/Stereo Mode Switch
15. LW/MW(AM)/FM Band Selector
16. Tape B Compartment Door
17. Tape B Play-Rewind-Fast Forward-Stop/ Eject-Pause Buttons
18. CD Display
19. Play/Programme/Repeat Button
20. Display/Programme/Repeat Button
21. Skip Up/Down Buttons
22. Play/Pause Buttons
23. Stop Button
24. Search Buttons
25. Open/Close Button
26. Repeat Indicator
27. Compact Disc Drawer
28. Tape A Record-Play-Rewind-Fast Forward-Stop/Eject-Pause Buttons
29. Tape A Compartment Door
30. Headphones Jack
31. Mic Jacks
32. Beat Cut Switch
33. Record Indicator
34. Function Selector (Tape/Phono/CD-Aux/ Tuner)
35. Power Switch
36. High Speed Dubbing Switch
37. Speaker Jacks
38. Aux (Auxiliary) Input Jacks
39. Antenna

ALIGNMENT PROCEDURE (AUDIO SECTION)

INSTRUMENTS AND TOOLS

1. MW signal generator.
2. FM signal generator.
3. I-F sweep generator with marker.
4. Oscilloscope.
5. Output meter (VTVM).
6. FM MPX signal generator.
7. Frequency counter.
8. Distortion meter.
9. Nonmetallic alignment tools.
10. Audio signal generator.

IMPORTANT

1. Check the power source voltage.
2. Set the "function" switch to a band to be aligned.
3. The "volume" control should be at maximum. (unless otherwise noted).
4. Connect the negative leads of the signal source and output indicator to the PCB chassis ground unless otherwise specified.
5. The signal input should be kept as low as possible to avoid AFC and AGC action.
6. The standard modulation is a 30% amplitude with a 1000Hz signal for MW, and is a 22.5KHz deviation with 1000Hz signal for FM.

1. MW ADJUSTMENT

(See Fig. 8 for ADJUSTMENT LOCATION)

Circuit to be Adjusted	Measuring Instrument arrangement	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment
I-F	Take out the signal from TP3,4 (See Fig. 2.)	1	455 KHz	Tuning gang fully closed.	T104 (MW IFT): Adjust for maximum output
		2	Repeat 1 until no further improvement can be made.		
Band MW	MW signal generator with loop antenna. Output meter (VTVM) across 4-ohm load. (See Fig. 3.)	3	515KHz (1000Hz mod.)	Tuning gang fully closed.	T101 (MW OSC Coil): Adjust for maximum output.
		4	1650KHz (1000Hz mod.)	Tuning gang fully opened.	TC-C2 (MW OSC trimmer): Adjust for maximum output
		5	Repeat steps 3 and 4.		
Tracking	MW signal generator with loop antenna. Output meter (VTVM) across 4-ohm load. (See Fig. 3.)	6	600KHz	Tune to signal	L103 (MW ANT coil): Adjust coil on ferrite core for maximum output.
		7	1400KHz	Tune to Signal	TC-C1 (MW ANT trimmer): Adjust for maximum output.
		8	Repeat steps 6 and 7 several times.		

Fig. 2.
MW/LW IF

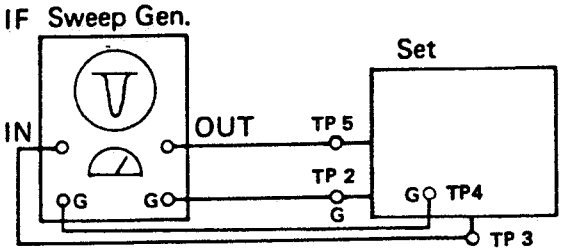
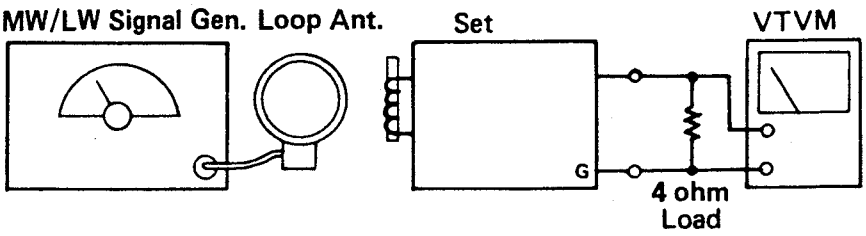


Fig. 3.
MW/LW BAND
TRACKING



2. LW ADJUSTMENT

(See Fig. 8 for ADJUSTMENT LOCATION)

Circuit to be Adjusted	Measuring Instrument arrangement	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment
IF	Take out the signal from TP3,4 (See Fig. 2.)	1	455 KHz	Tuning gang fully closed.	T104 (LW IFT): Adjust for maximum output
		2	Repeat 1 until no further Improvement can be made		
Band LW	LW signal generator with loop antenna. Output meter (VTVM) across 4-ohm load. (See Fig. 3.)	3	145KHz (1000Hz mod.)	Tuning gang fully closed.	T102 (LW OSC coil): Adjust for maximum Output.
		4	315 KHz (1000Hz mod.)	Tuning gang fully opened.	TC-C2 (MW OSC trimmer) Adjust for maximum output.
		5	Repeat steps 3 and 4.		
Tracking	LW signal generator with loop antenna. Output meter (VTVM) across 4-ohm load. (See Fig. 3.)	6	180 KHz	Tune to signal	L104 (LW ANT coil): Adjust coil on ferrite core for maximum output.
		7	280 KHz	Tune to Signal	TC-C1 (MW ANT trimmer): Adjust for maximum output.
		8	Repeat steps 6 and 7 several times.		

Fig. 4.
FM IF

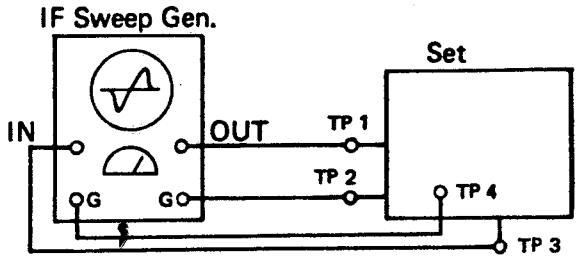
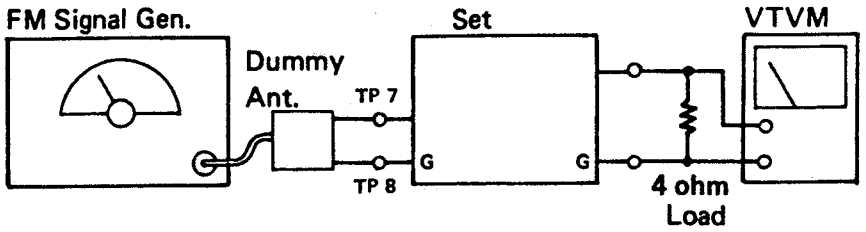


Fig. 5.
FM BAND
TRACKING



3. FM ADJUSTMENT

(See Fig. 8 for ADJUSTMENT LOCATION)

Circuit To Be Adjusted	Measuring Instrument Arrangement	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment
I-F	I-F sweep generator with marker to FM TP1, TP2 Oscilloscope across TP3, TP4 (See Fig. 4.)	1	10.7MHz	Tuning gang fully closed.	T103 (FM IFT): Adjust for maximum symmetrical response with 10.7MHz at center point.
		2	10.7MHz	Tuning gang fully closed.	T105 (FM IFT): Adjust for straightness and symmetry of "S" curve with 10.7MHz marked at zero crossover.
		3	Repeat step 1 and 2 as necessary to obtain maximum gain and selectivity.		
Local OSC	FM signal generator to FM ANTENNA terminal thru 300 ohm antenna matching network. Output meter (VTVM) across 4-ohm load. (See Fig. 5.)	4	87.38 (1000Hz mod.)	Tuning gang fully closed.	L102 (FM OSC coil): Adjust for maximum output.
		5	108.25MHz (1000Hz mod.)	Tuning gang fully opened.	TC/FC-1 (FM OSC trimmer): Adjust for maximum output.
		6	Repeat steps 4 and 5 several times.		
RF AMP	FM signal generator to FM ANTENNA terminal thru 300 ohm antenna matching network Output meter (VTVM) across 4-ohm load. (See Fig. 5.)	7	90MHz (1000Hz mod.)	Tune to signal.	L101 (FM RF coil): Adjust for maximum output.
		8	106MHz (1000Hz mod.)	Tune to signal.	TC/FC-2 (FM RF trimmer): Adjust for maximum output.
		9	Repeat steps 7 and 8 to obtain suitable sensitivity at 90MHz and 106MHz		

4. FM MPX ADJUSTMENT

Circuit To Be Adjusted	Measuring instrument Arrangement	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment
76KHz	Frequency counter connect to IC101 PIN NO. 11. (See Fig. 6.)	1	Not needed	Not needed	First make sure FM section is properly aligned. Adjust SVR101 until frequency counter reads 76KHz

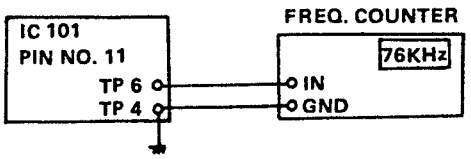


Fig. 6. 76KHz PILOT ADJUSTMENT

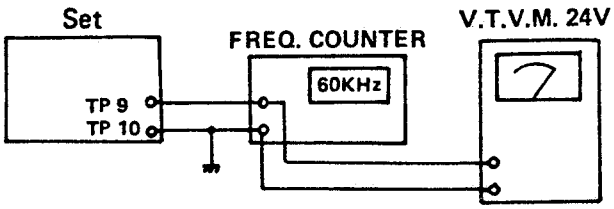


Fig. 7. RECORDING BIAS ADJUSTMENT

5. CASSETTE TAPE ADJUSTMENT

Circuit to be Adjusted	Measuring Instrument arrangement	Step	Adjust Point	Adjustment
Recording bias	Connect frequency counter and VTVM to TP 9 (See Fig. 7.)	1	Adjust L201	Check frequency 68KHz.
		2	Adjust L201	Reading on VTVM Should be 24V.

ADJUSTMENT LOCATION (AUDIO SECTION)

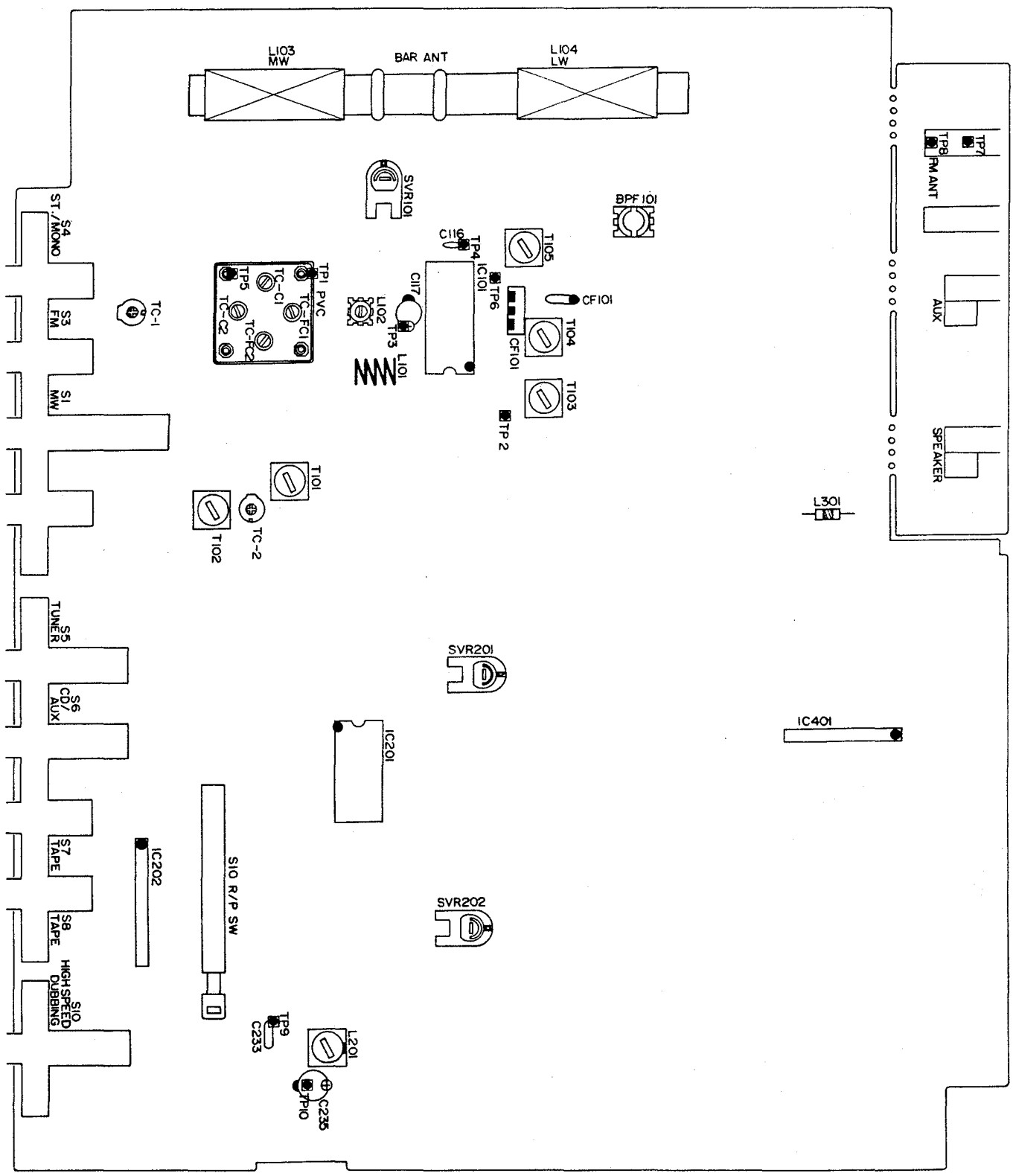


Fig. 8.

6. MECHANICAL ADJUSTMENT

1. Tape Speed Adjustment:
   a) Connect the equipment as per Fig. 9 to adjust the tape speed with test tape. (Recorded at 3KHz).
   b) Set Band Selector Switch to Tape and volume at standard output level(500mW, 4 ohm) and graphic equalizer control at the CENTER position.
   c) Adjust semi-fixed resistor SVR202 (NORMAL: 3KHz) and SVR202 (HI: 4.5KHz) on the frequency counter.
2. Tape Azimuth Adjustment:
   a) Connect the equipment as per Fig. 9 to adjust the tape azimuth with test tape. (Recorded at 6.3KHz)
   b) Set function Selector Switch to Tape, graphic equalizer control at the CENTER position and volume at standard output level. (500mW, 4 ohm)
   c) Adjust the azimuth adjustment screw on right side of Record/Play head for maximum output.

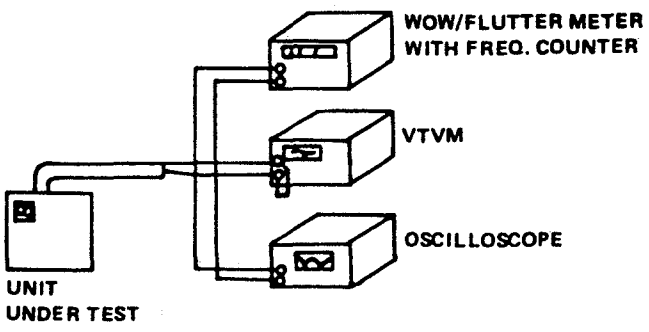


Fig. 9. TAPE SPEED AND AZIMUTH ADJUSTMENT

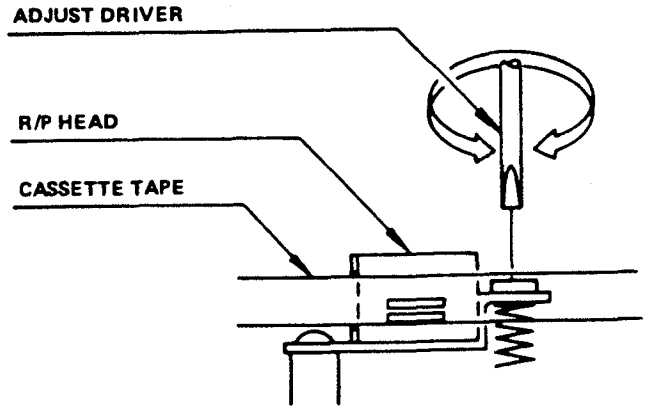


Fig. 10. R/P HEAD ADJUSTMENT

3. Take-up Torque Adjustment
   a) Insert the Cassette-type torque meter into the unit and measure the torque of the Take-up Reel with the unit in the playback mode.
   The take-up torque should be 0.49–0.98 inch-oz. (35–70 g-cm).
   b) If necessary, adjust the torque by moving the Clutch Spring Plate of the Take-up Reel Ass'y as illustrated.
4. Fast Forward & Rewind Torque
   a) The fast forward and rewind torque value measured by cassette-type torque meter should be OVER 0.7 inch-oz (OVER 55g-Cm).
   b) In case the torque value is not OVER 0.7 inch-oz (OVER 55g-Cm) be sure to replace Rew./F.F. belt.

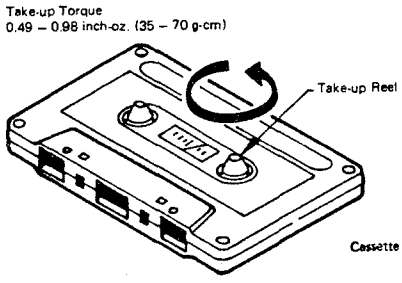


Fig. 11.

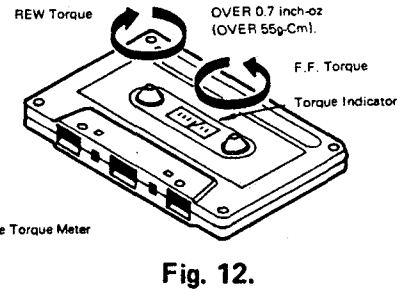


Fig. 12.

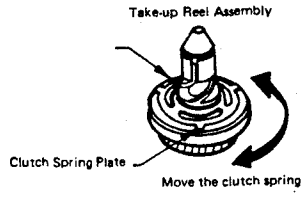
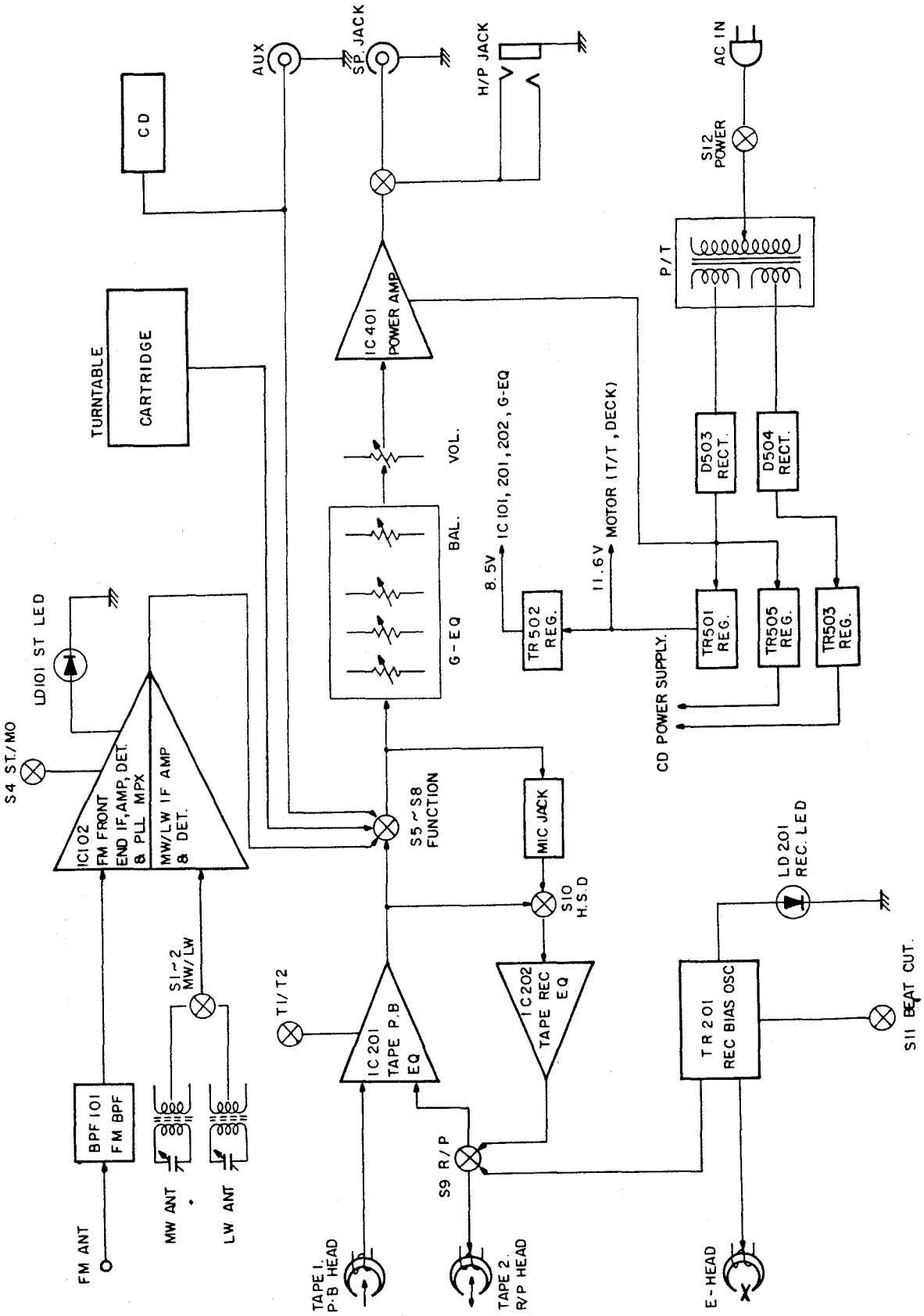
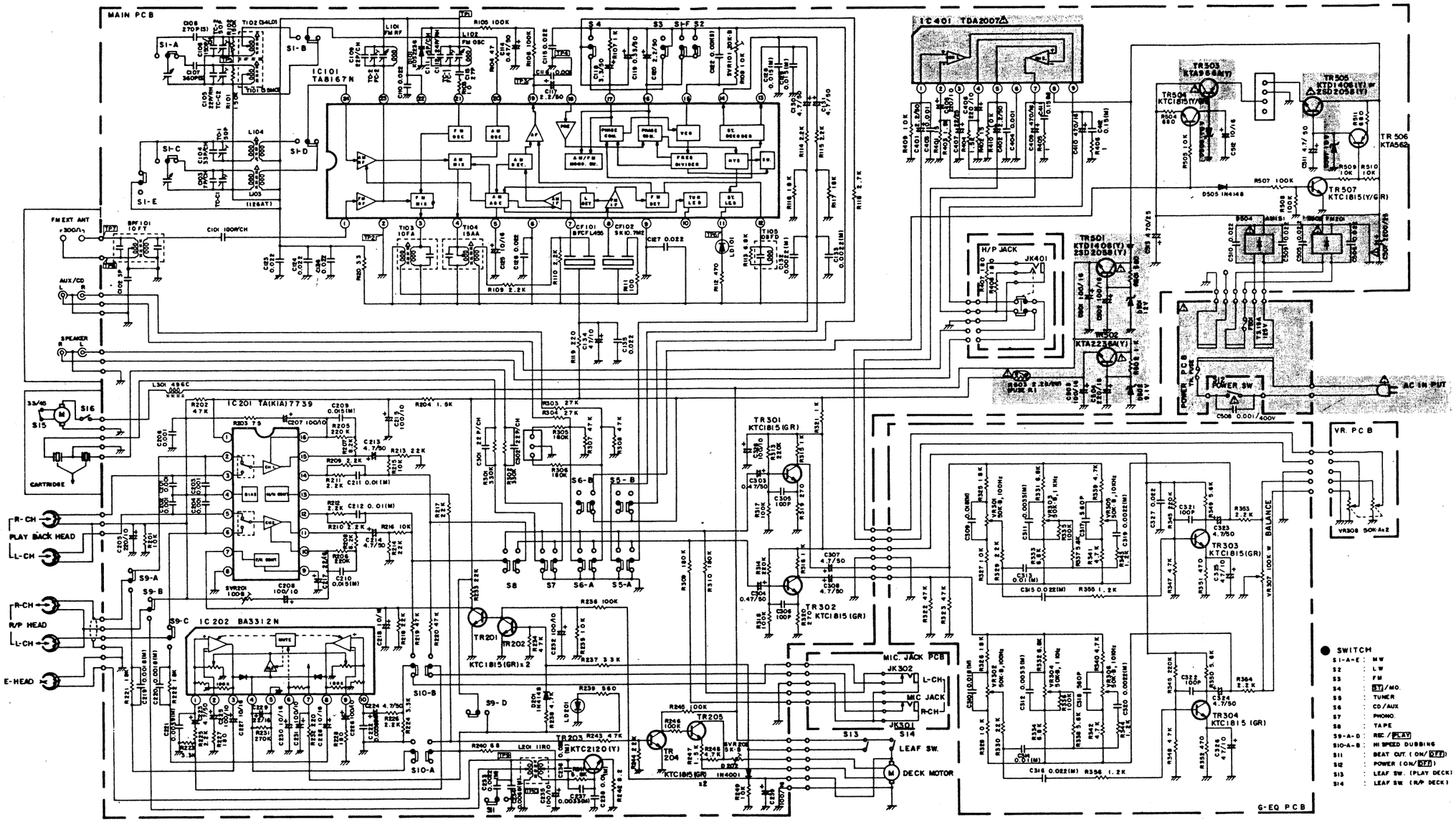


Fig. 13.

BLOCK DIAGRAM (AUDIO SECTION)



SCHEMATIC DIAGRAM (AUDIO SECTION)



● SWITCH

S1-A~E	:	MW
S2	:	LW
S3	:	FM
S4	:	ST./MO.
S5	:	TUNER
S6	:	CD/AUX
S7	:	PHONO
S8	:	TAPE
S9-A~D	:	REC / PLAY
S10-A~B	:	HI SPEED DUBBING
S11	:	BEAT CUT (ON/OFF)
S12	:	POWER (ON/OFF)
S13	:	LEAF SW. (PLAY DECK)
S14	:	LEAF SW. (R/P DECK)

※ NOTES

1. RESISTANCE VALUES ARE INDICATED IN OHM 1/8W UNLESS OTHERWISE SPECIFIED. (K=10^3, M=10^6)
2. CAPACITANCE VALUES ARE SHOWN IN uF, DC 50(V) UNLESS OTHERWISE NOTED. (u=10^{-6}, P=10^{-12} -(M)=MYLAR, -(S)=STYROL, -(X)=SEMICONDUCTIVE)
3. ELECTROLYTIC CAPACITORS ARE INDICATED AS FOLLOWS: CAPACITANCE (uF) / WORKING VOLTAGE (V).
4. THE COMPONENTS VALUES OF THIS SCHEMATIC DIAGRAM ARE SUBJECT TO CHANGE WITHOUT NOTICE FOR IMPROVEMENT.

IC VOLTAGE CHART (UNIT : VOLT, NO SIGNAL)

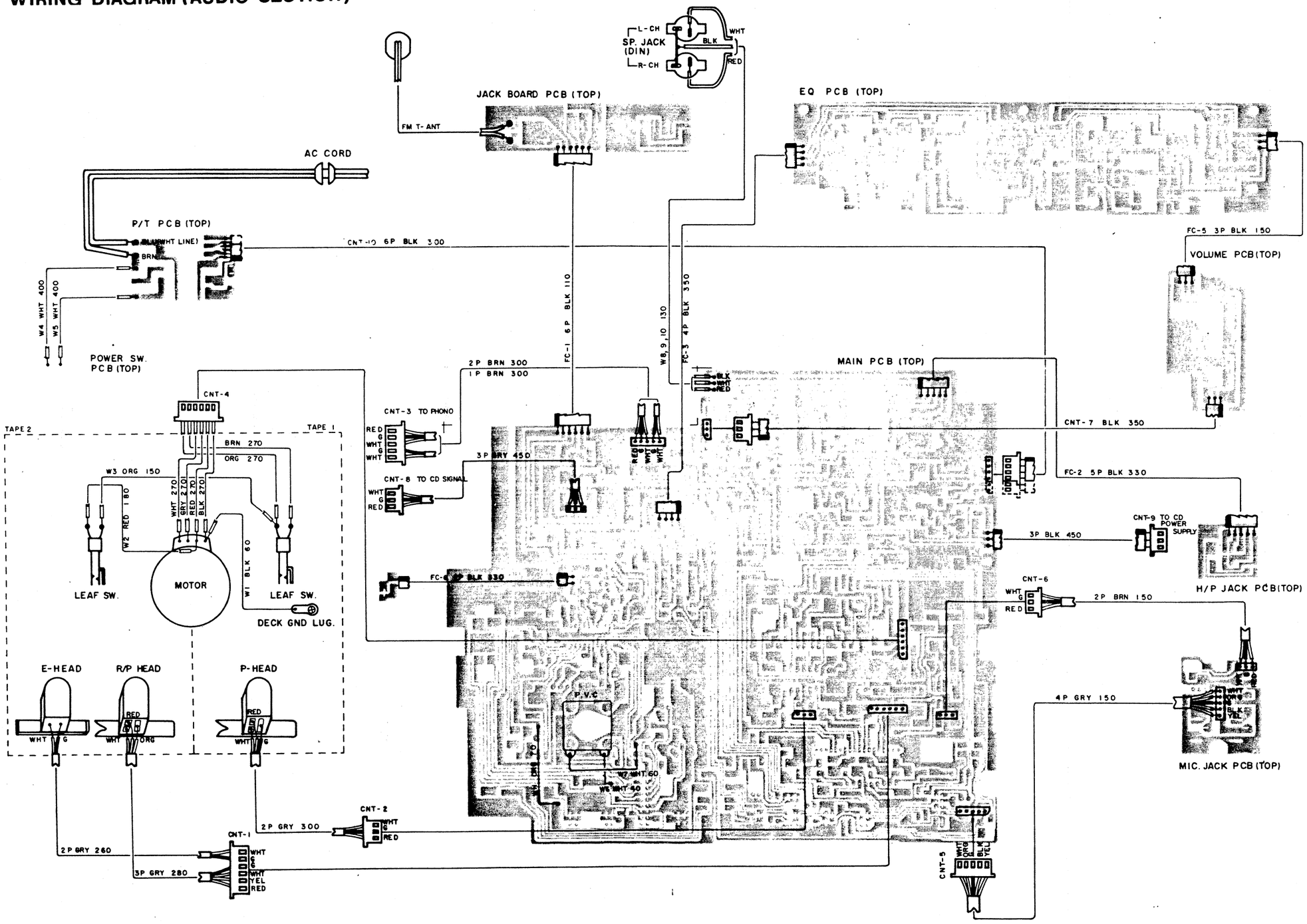
IC NO.	MODE	PIN NO. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
101	AM	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	FM	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
201	PLAY	6.3	1.8	1.5	1.5	1.8	1.6	0	0	0.9	1.8	1.8	0	0	0	1.6	1.8								
202	REC.	0	0.6	3.2	0	0	7.6	7.7	3.2	0.6	0														
401		1.4	0.8	9.6	0.6	1.4	0	8.2	16.2	8.2															

TRANSISTOR

TR NO.	201	202	203	204	205	301	302	303	304	501	502	503	505	506	507
MODE			REC									CD	CD	CD	CD
E	0	0	0.2	0	0	0.9	0.9	0.8	0.8	11.8	8.5	-0.1	8.4	10.2	0
C	0	0	6.1	0	0	4	4	2	2	14	12	-14	10.6	9.1	0
B	0	0	0.3	0	0	1.5	1.5	1.4	1.4	12.5	9.2	-0.7	9.0	9.5	0.6

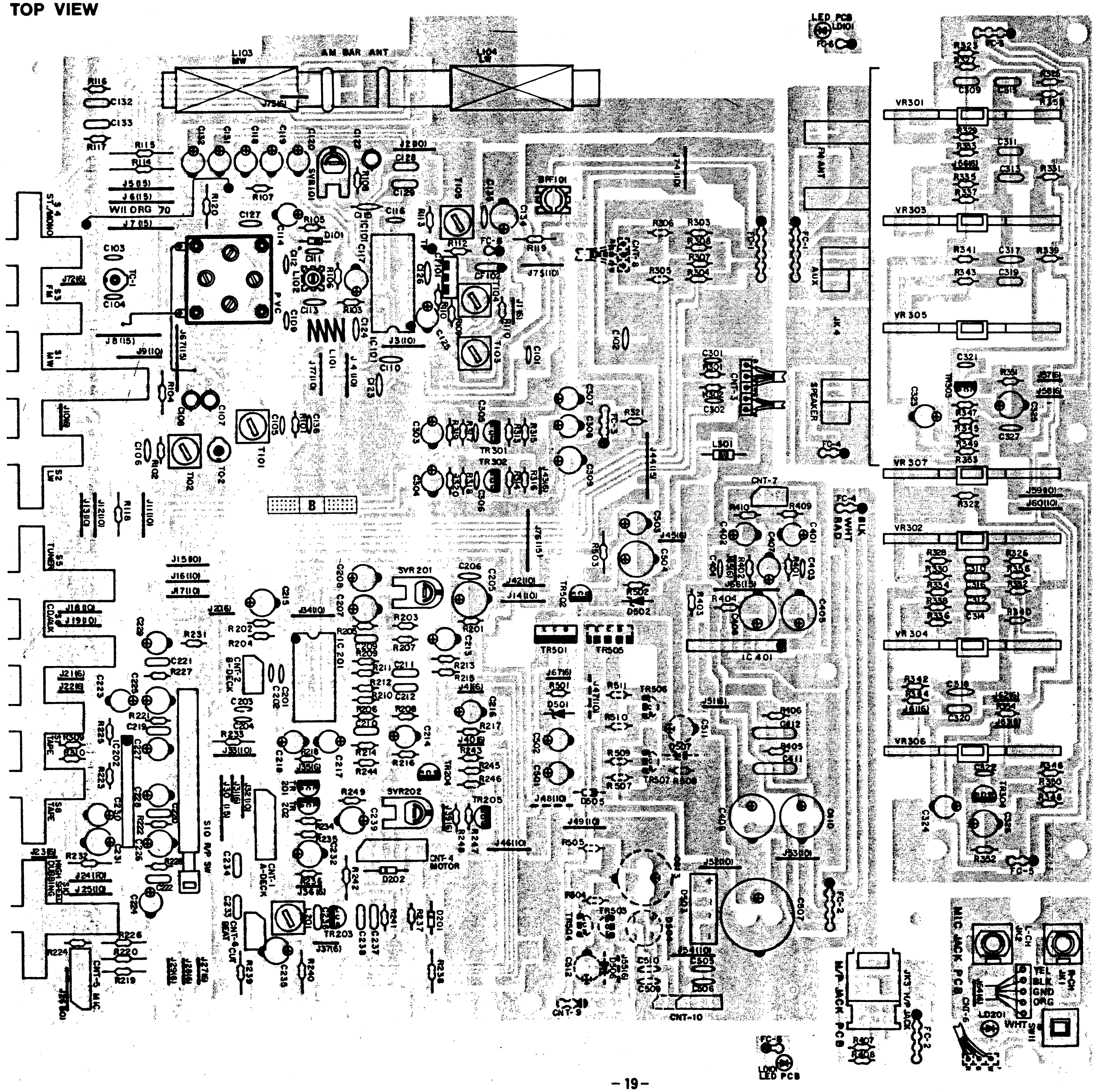
SAFETY NOTE: THE COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.

WIRING DIAGRAM (AUDIO SECTION)



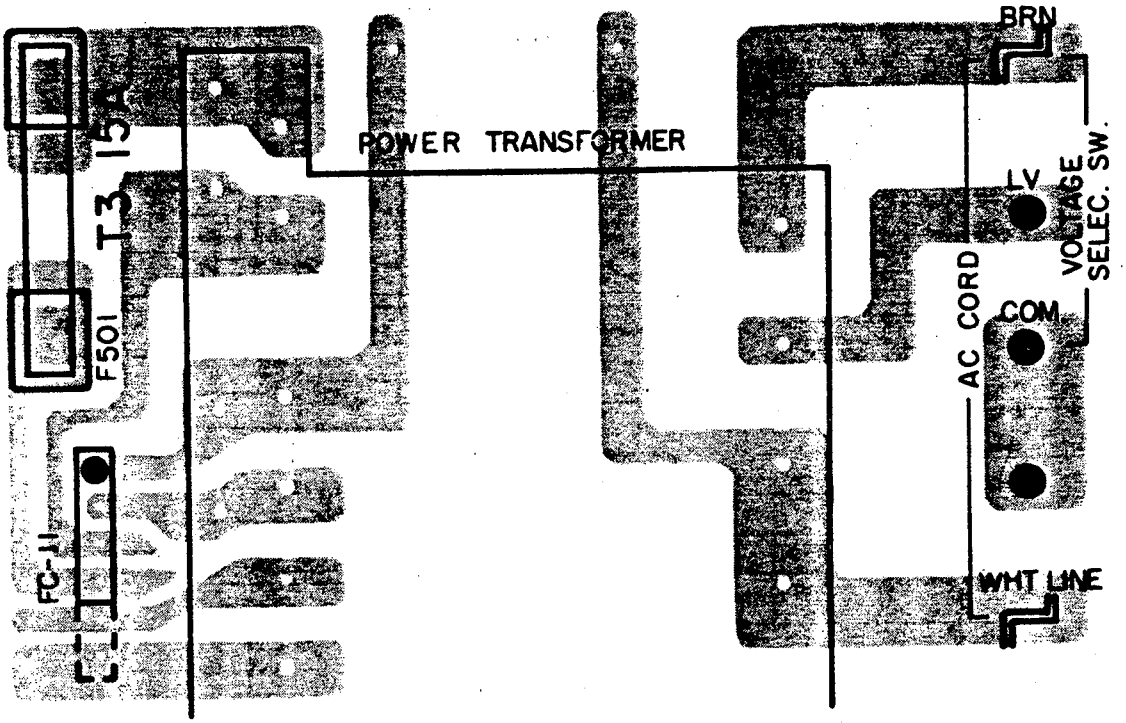
MAIN P. C. BOARD ASS'Y (AUDIO SECTION)

TOP VIEW



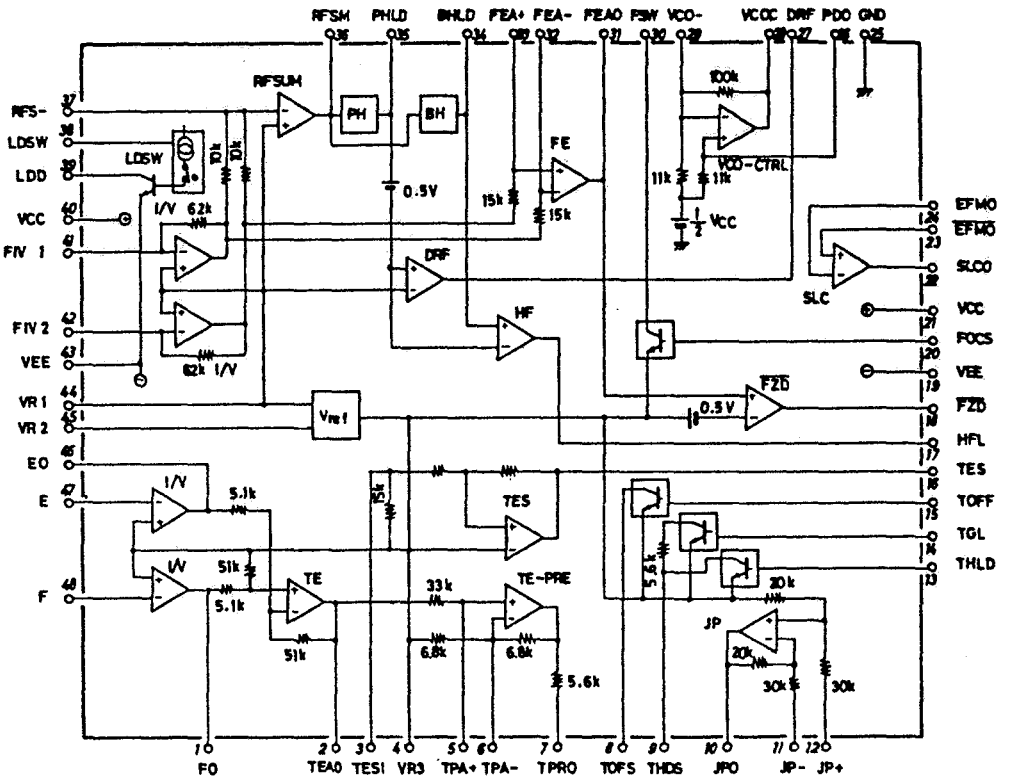
P/T P.C. BOARD ASS'Y

TOP VIEW

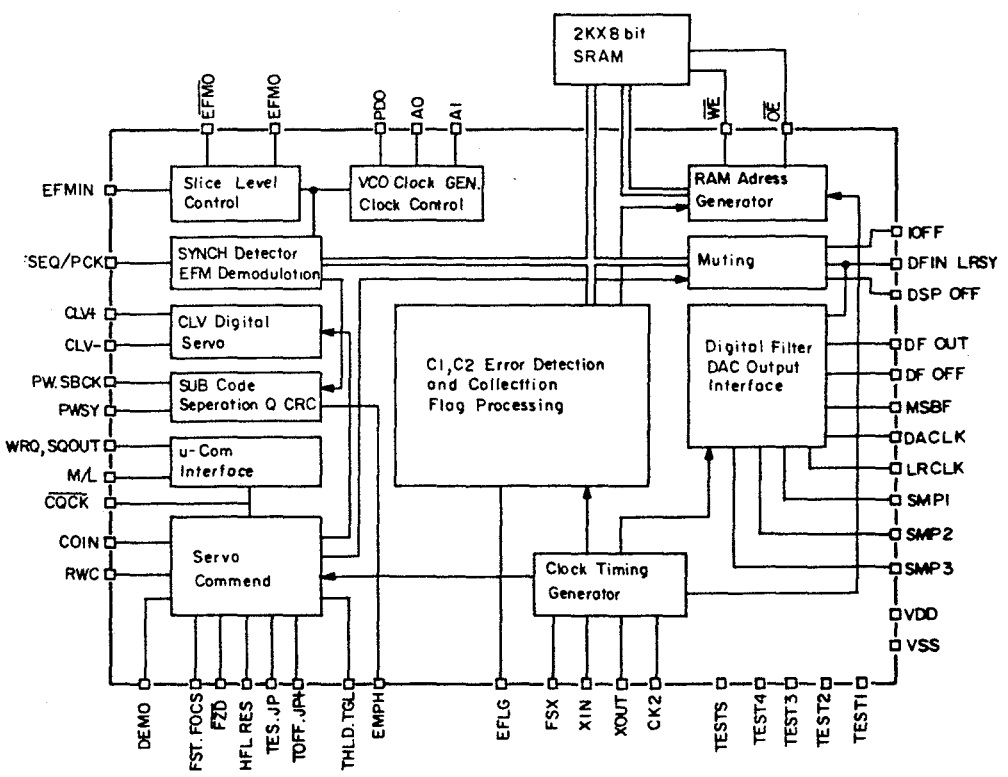


IC LEAD IDENTIFICATION (CD SECTION)

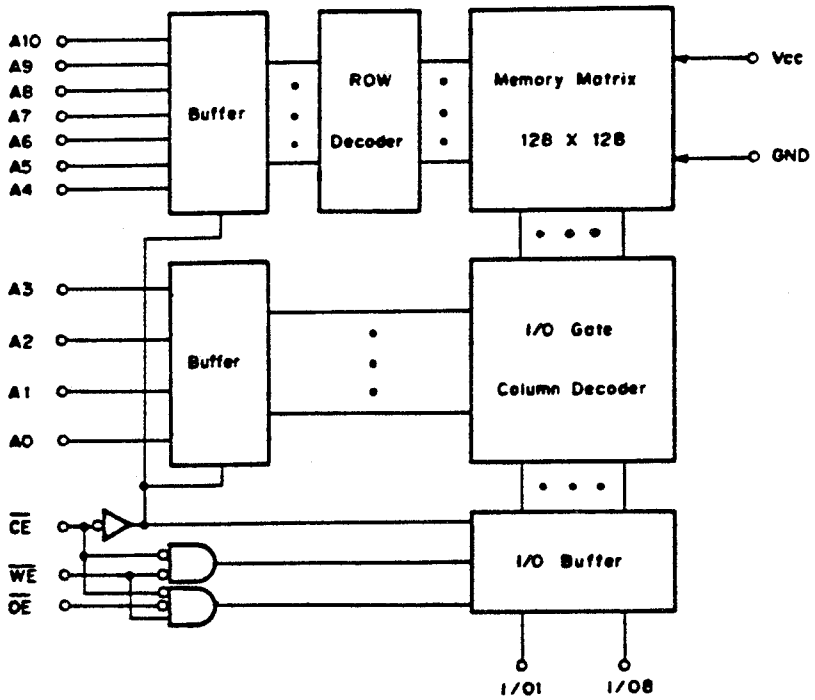
IC100 LAP200NM



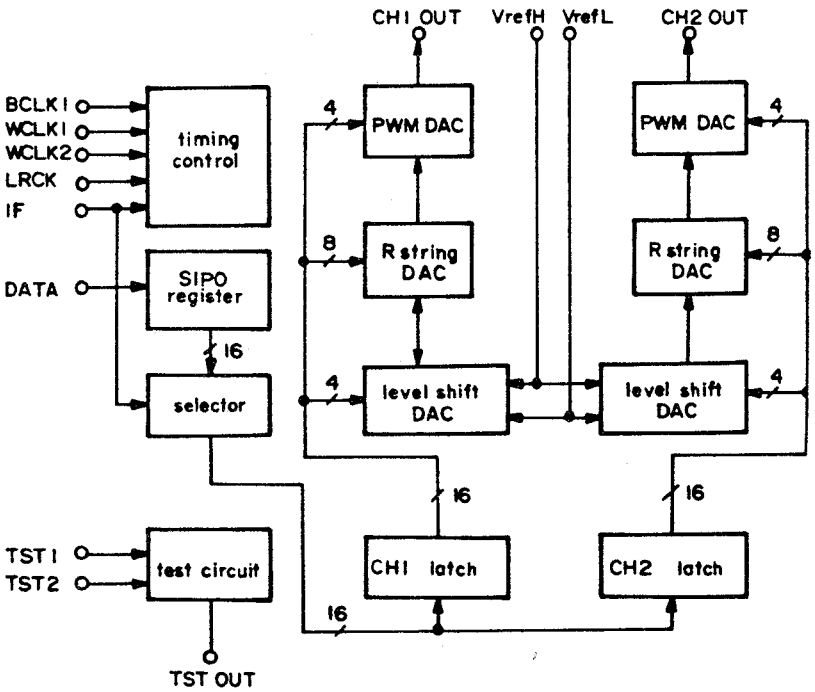
IC200 LC7860NA



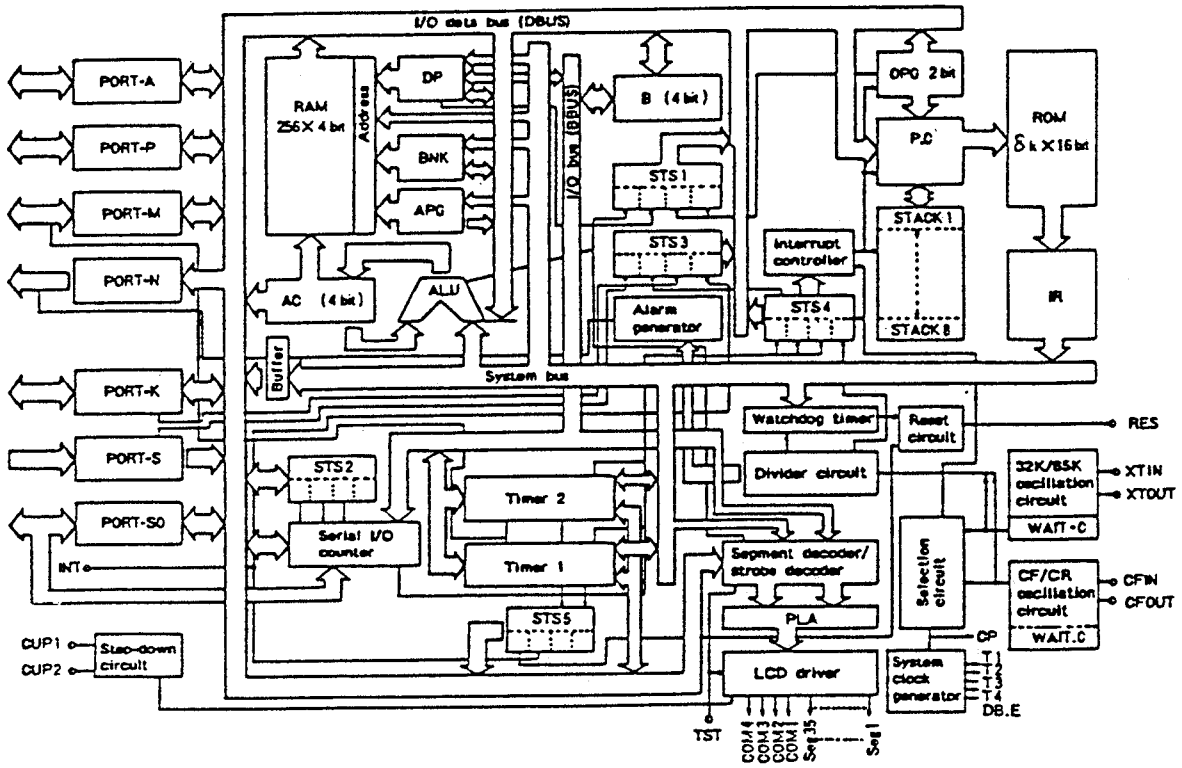
IC300 LC3517RM-15



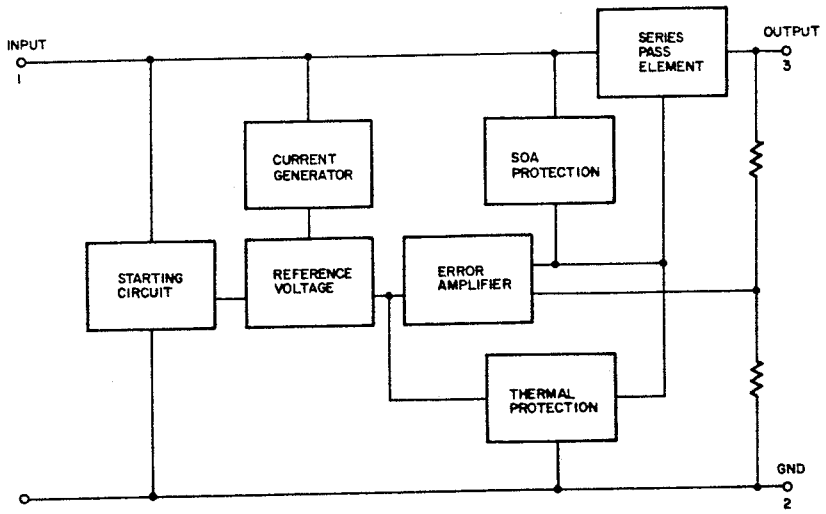
IC400 LC7880



IC500 CDH2002

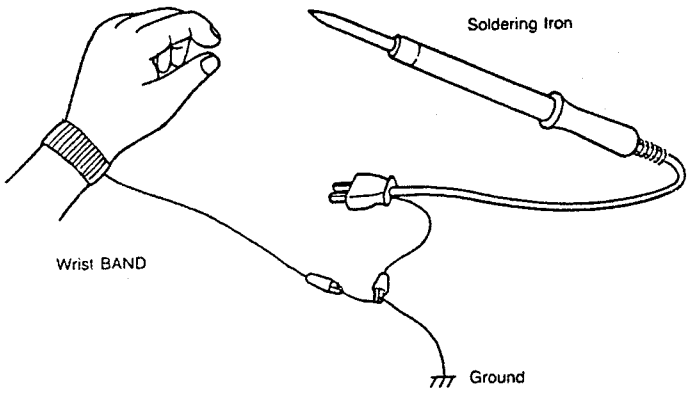


IC800 MC7805



HOW TO CHANGE THE LASER PICK-UP

1. In handling the pick-up without APC circuit, close care must be taken. The anode and the cathode of the laser diode of a new pick-up (for repair) are shorted in advance to prevent damage due to static discharge. Use the best care when the pick-up is changed and the short circuit (solder short or short by a connector) is opened.
2. The person handling the pick-up for replacement shall put on a wrist band without fail. A solder iron with ground shall be prepared, and connect the wrist band and the ground of the solder iron to a steel arm or some other structure which can ensure grounding.



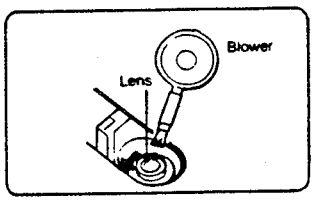
Refrain from removing the ground before the work is completed.

MAINTENANCE

CLEANING THE CASING
Clean the casing with a soft cloth slightly moistened with water or mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine as they may mar the finish of the casing.

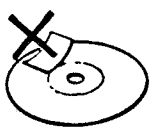
CLEANING THE LENS
If you have accidentally touched the lens with a dirty finger or if the dust on the lens prevents the set from operating properly, open the disc compartment lid and clean the lens.

TO REMOVE DUST
Blow on the lens a few times with a commercially available blower, brush the dust away in the direction of the arrow, then blow on the lens again.



NOTES ON COMPACT DISCS

Handle the disc by its edge, and to keep the disc clean do not touch the rainbow coloured surface.



Do not stick paper or tape nor write anything on the labeled surface.

Before playing, clean the disc with the optional cleaning cloth.
Wipe the disc from the center out.

Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for analog discs.

After playing, store the disc in its case.

Do not expose the disc to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight where there can be a considerable rise in the temperature.

ALIGNMENT PROCEDURE (CD SECTION)

1. REQUIRED EQUIPMENTS

* DC Voltmeter
* Dualtrace Oscilloscope
* Frequency Counter
* Test DISC (A-BEX: TCD781, A-BEX: TCD725)
* AC Voltmeter

2. SETTING OF INITIAL POSITION OF VOLUME

The variable resistors are set to the following initial position.

a. SVR102 (EF BALANCE) : MECHANICAL CENTER
b. SVR104 (FOCUS OFFSET) : MECHANICAL CENTER
c. SVR101 (TRACKING OFFSET) : MECHANICAL CENTER
d. SVR105 (FOCUS GAIN) : MECHANICAL CENTER
e. SVR103 (TRACKING GAIN) : MECHANICAL CENTER

3. FREE RUN FREQUENCY ADJUSTMENT

a. Turn on the power and set the unit to the stop mode.
b. Connect the frequency counter between test pin VCO of point TP1 and TP8.
c. Rotate the core of the PLL OSC coil T201 with plastic driver so that the frequency counter indicates 4.3218MHz.

4. E-F BALANCE ADJUSTMENT

a. Turn on the power and load the DISC (A-BEX: TCD781) in the CD compartment set the unit to the stop mode.
b. SHORT Test pins TP5,6,7 and TP8. (GROUND)
c. SHORT Test pin TP9 and TP8 (GROUND), and connect DC voltmeter and oscilloscope to test, pin X through the LOW-PASS filter shown below.

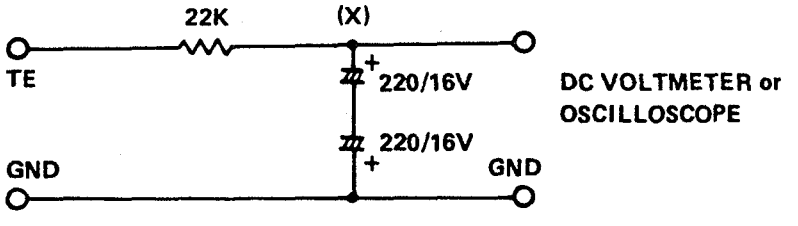


Fig. 1.

d. Press the F.FWD button, the TRACK indicates "1" and the DISC begins run. Press the PLAY/PAUSE button continuously, the unit is operating under the TRACKING SERVO turned off.
e. Adjust SVR102 so that the DC voltmeter or oscilloscope is 0V±15mV.
f. Remove the short between test pins and GND.

5. ADJUSTMENT OF FOCUS/TRACKING GAIN

The measurement circuit shown below is necessary for accurate adjustment of the FOCUS and TRACKING GAIN.
If this circuit cannot be mode and make adjustments using the simplified procedure.

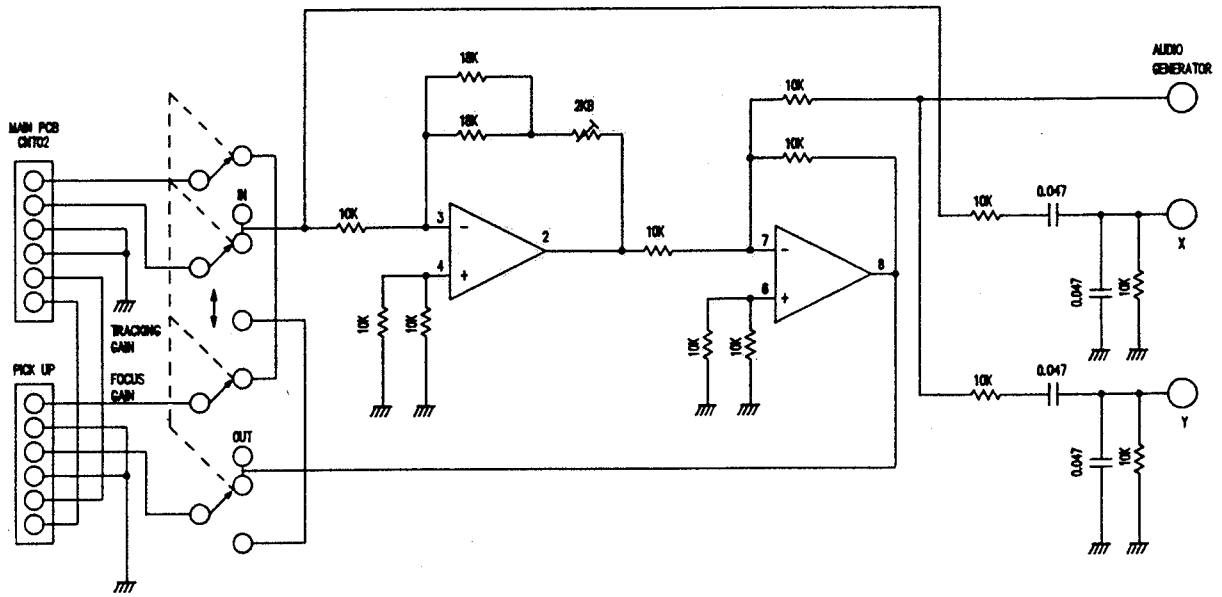


Fig. 2.

A. SIMPLIFIED ADJUSTMENT

a. FOCUS GAIN ADJUSTMENT
Adjust SVR105 to the position 15° from its mechanical center as shown in the diagram below.
b. TRACKING GAIN ADJUSTMENT
Adjust SVR103 to the position 15° from its mechanical center as shown in the diagram below.

B. PRECISE ADJUSTMENT

a. FOCUS GAIN ADJUSTMENT

1. Connect the measurement circuit Fig. 3, turn on the POWER, and load the test DISC.
2. Playback the first selection on the test DISC, and apply the 1.1KHz, 0.5V p-p signal from the generator.
3. Observe the LISSAJOUS waveform on the oscilloscope and adjust SVR105 so that the phase difference of output X and Y form the measurement circuit is 90°.

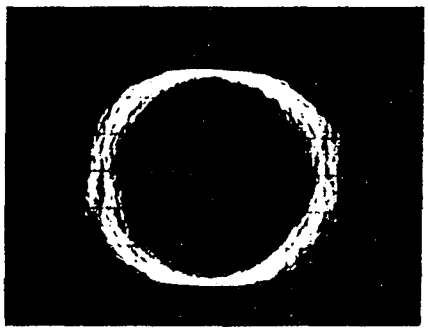


Fig. 3.

b. TRACKING GAIN ADJUSTMENT

Adjustment is made in the same method as for focus gain.
The input from the frequency generator is set the 1.2KHz 0.5V p-p, and SVR103 is adjusted so that the phase difference is 90°

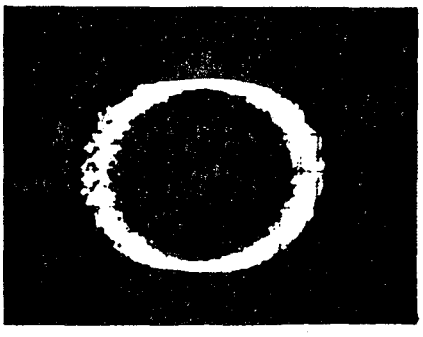


Fig. 4.

6. FOCUS OFFSET ADJUSTMENT

a. Turn on the POWER and set the unit to the STOP mode.
b. Connect DC voltmeter and oscilloscope between test pin F-COIL of TP3. Short test pin TP6 and TP8 (GND).
c. Adjust SVR104 so that the indication on DC voltmeter and oscilloscope is 0V±10mV
d. Remove the short between test pin TP6 and TP8 (GND).

7. TRACKING OFFSET ADJUSTMENT

a. Turn on the POWER and set the unit to the STOP mode.
b. Connect DC voltmeter and oscilloscope between test pin T-COIL of TP4 and TP8 (GND). Shrot test pin TP6 and TP8 (GND).
c. Adjust SVR101 so that the indication on DC voltmeter and oscilloscope is 0V±10mV.
d. Remove the short between test pin TP6 and TP8 (GND).

8. CONFIRMING EYE PATTERN

a. Turn on the POWER and LOAD test DISC in the CD compartment set the unit to the PLAY button.
b. Connect the oscilloscope to the test point TP2.
c. Confirm waveform so that indication on the oscilloscope is below.

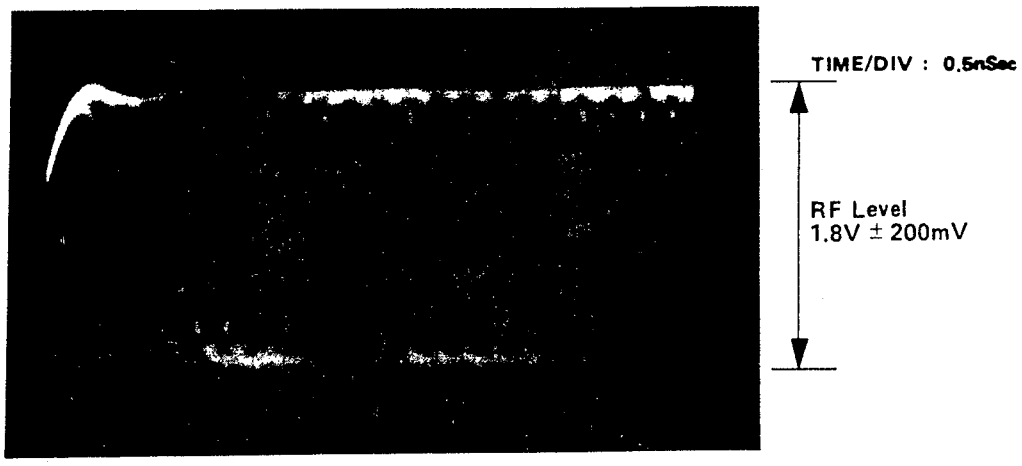
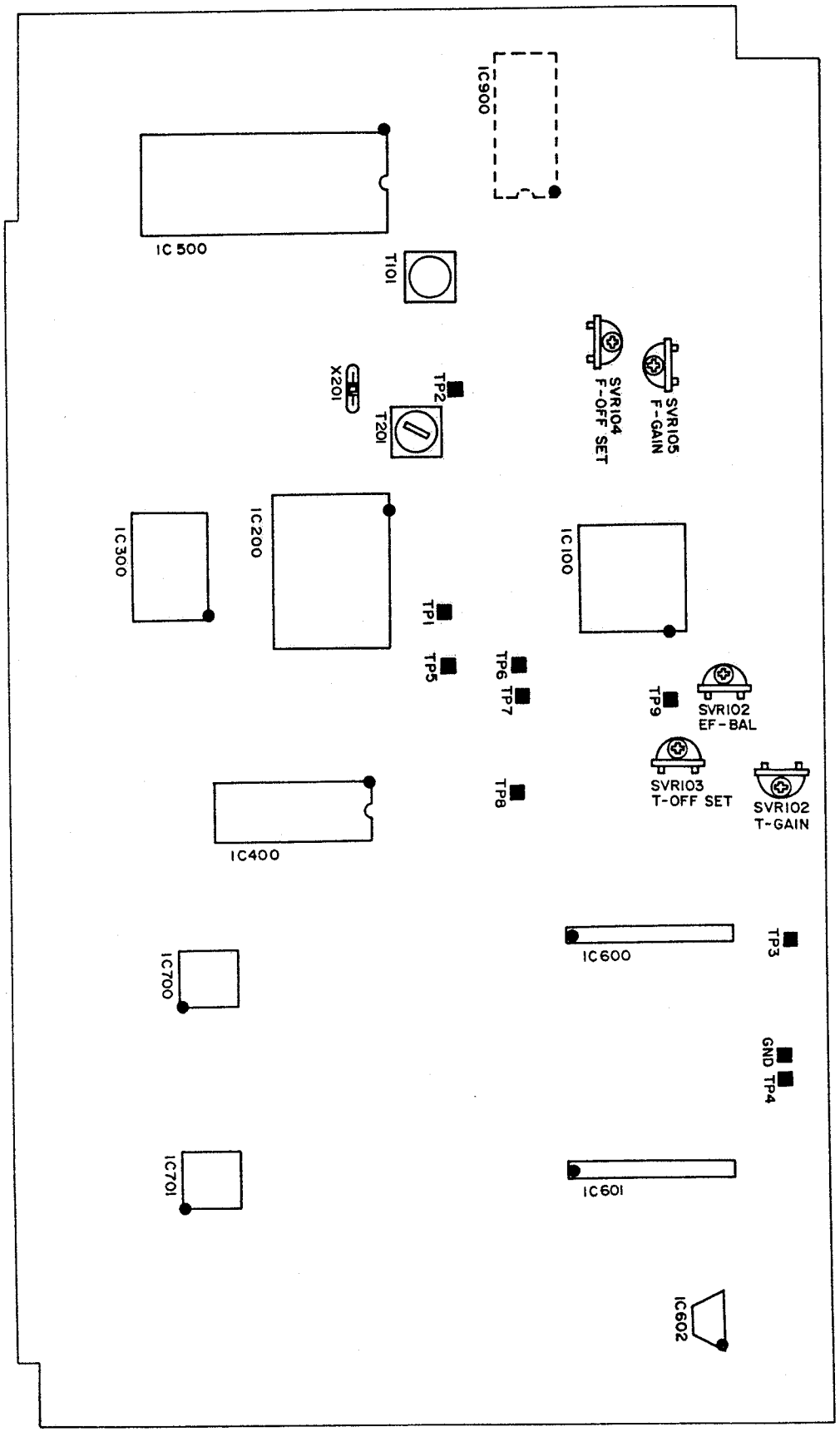
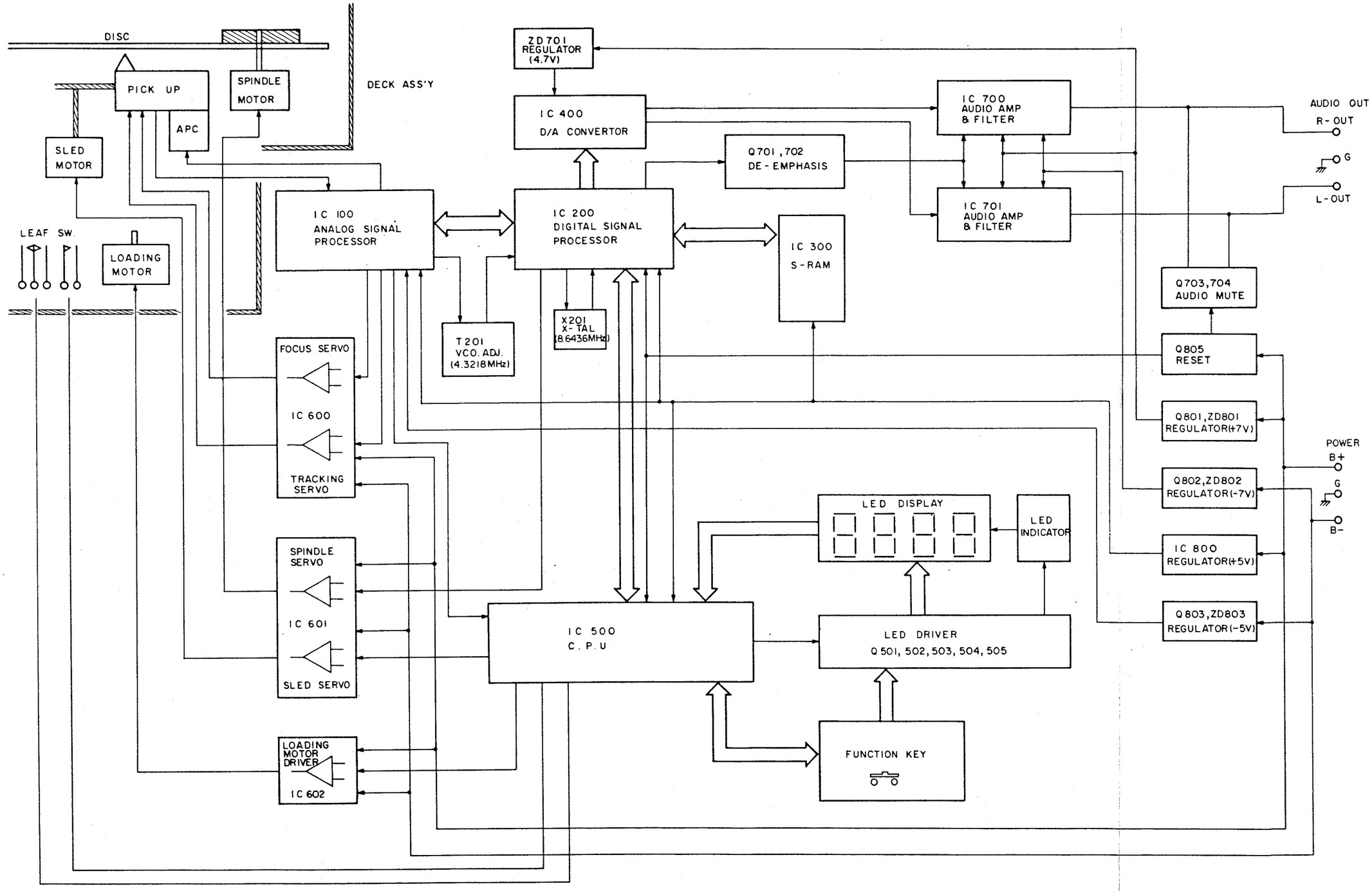


Fig. 5.

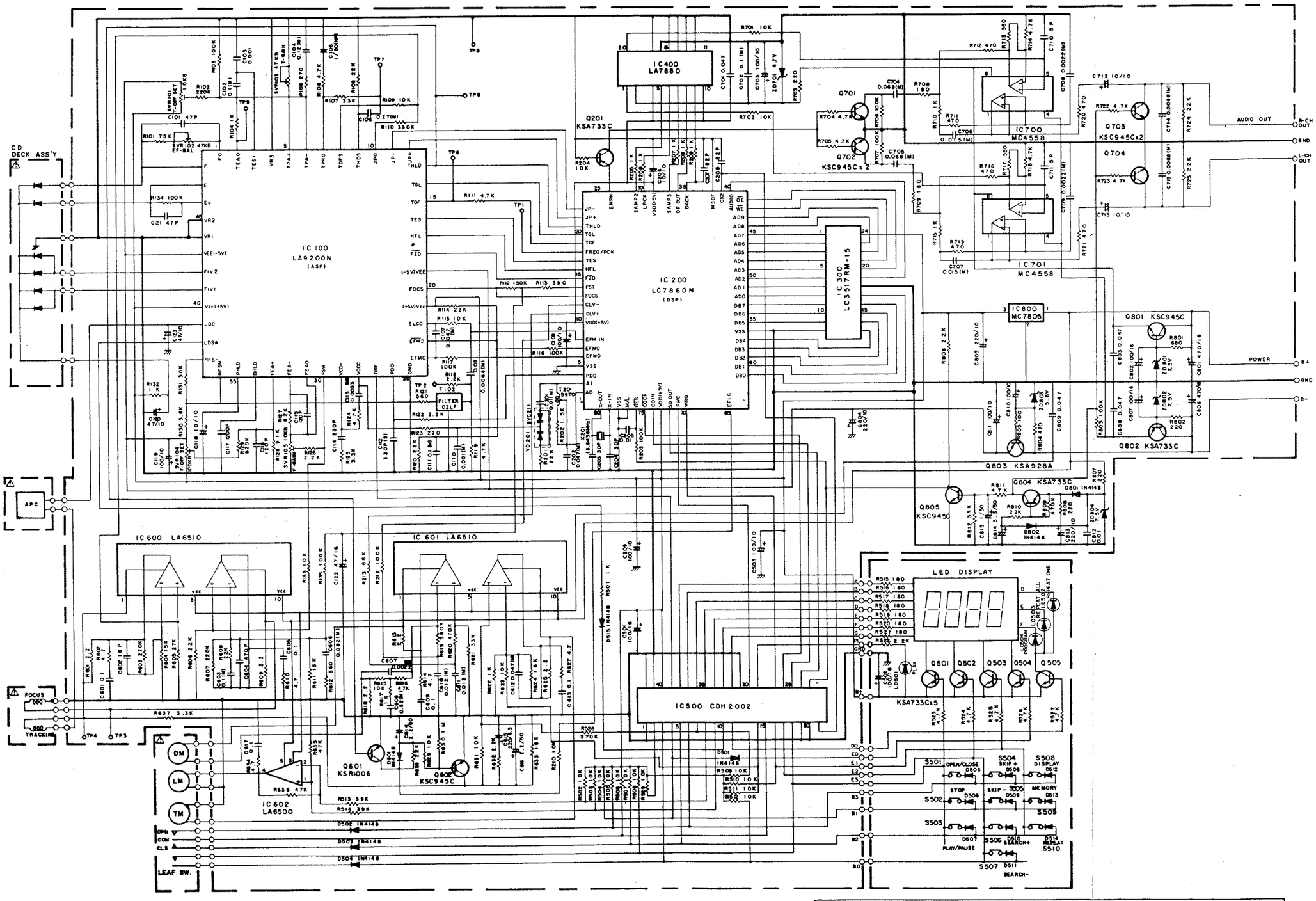
ADJUSTMENT LOCATION (CD SECTION)



BLOCK DIAGRAM (CD SECTION)

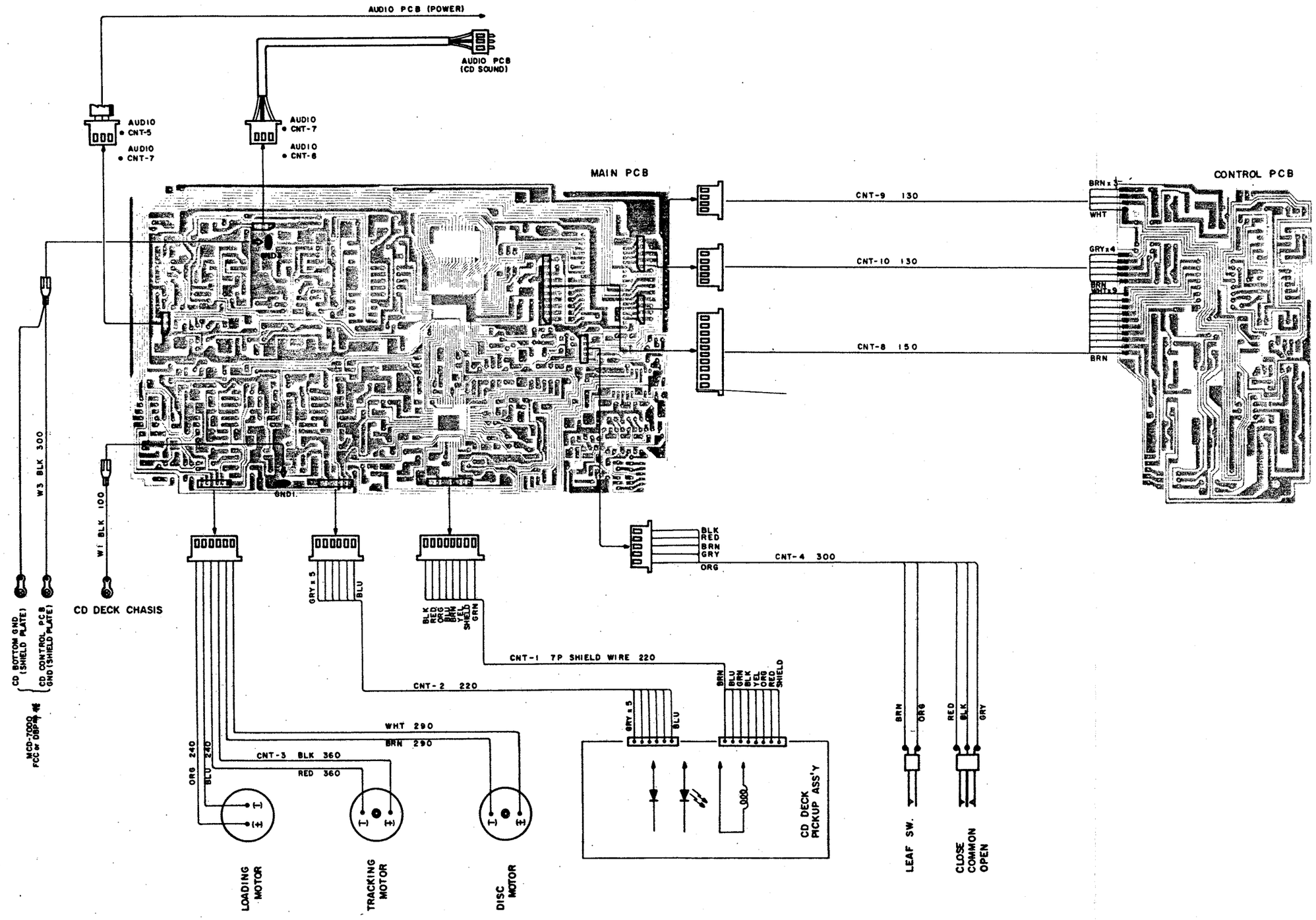


SCHEMATIC DIAGRAM (CD SECTION)



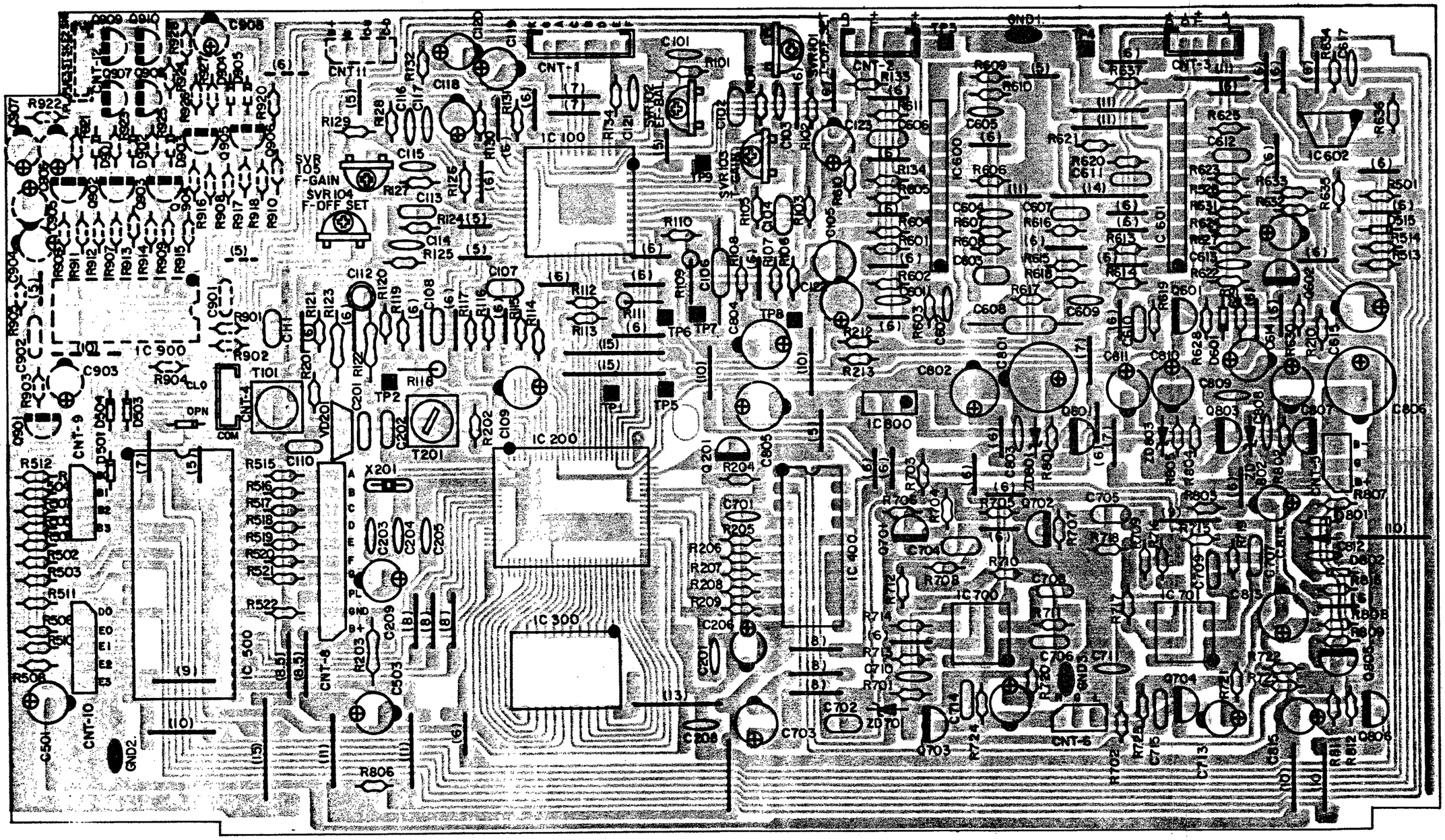
SAFETY NOTE: THE COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.

WIRING DIAGRAM (CD SECTION)



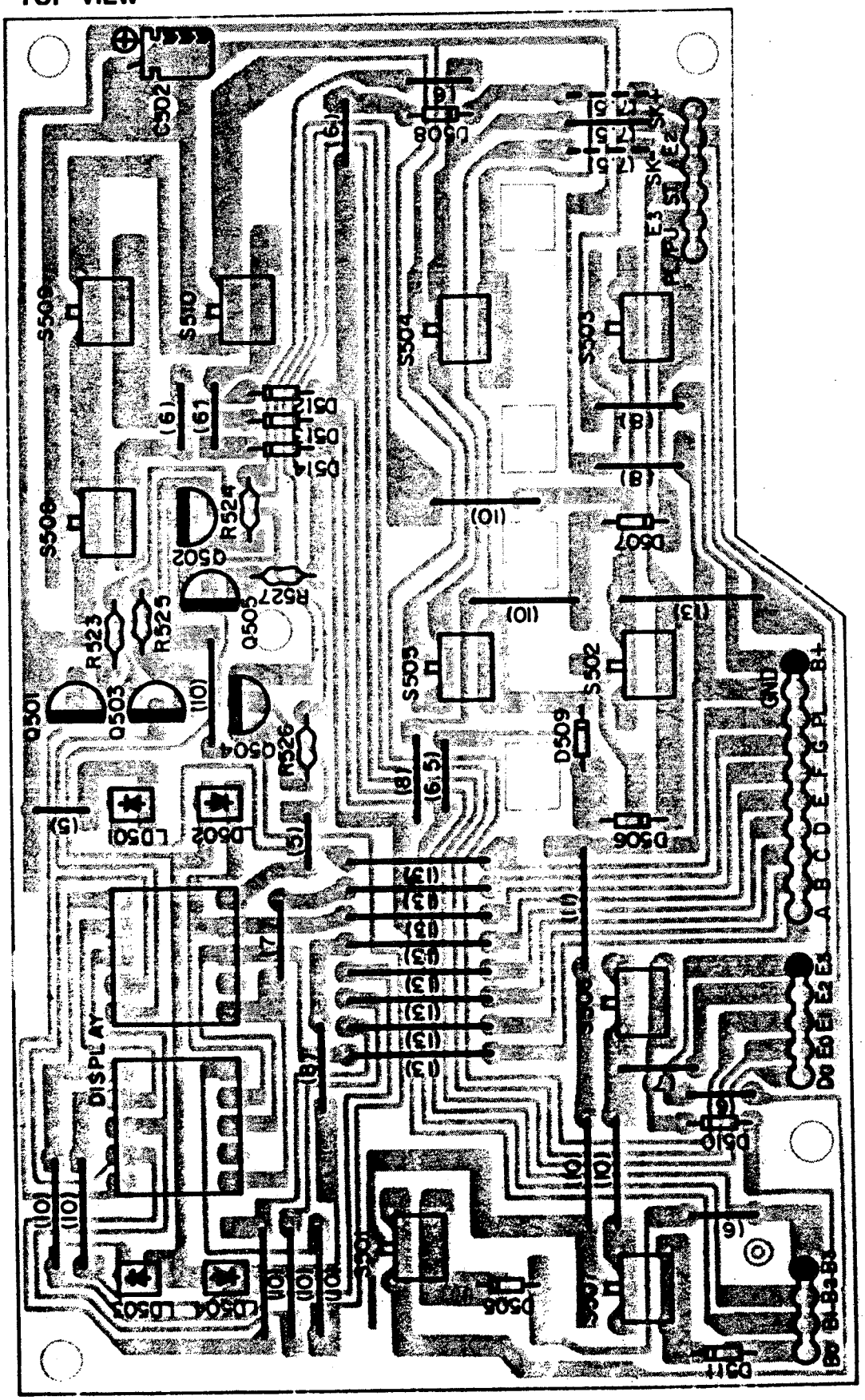
MAIN P. C. BOARD ASS'Y (CD SECTION)

TOP VIEW

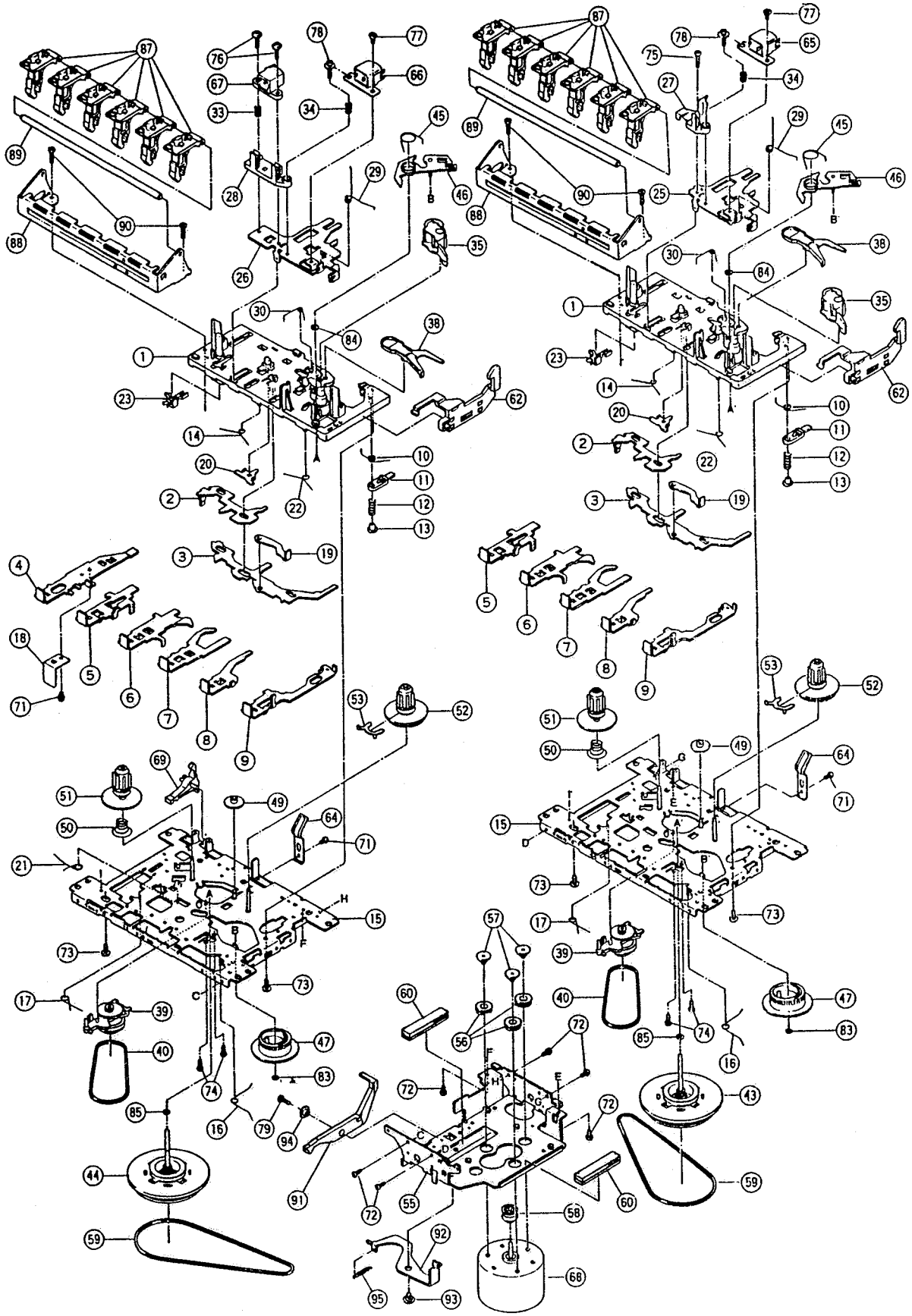


CONTROL P.C.BOARD ASS'Y

TOP VIEW



CASSETTE DECK EXPLODED VIEW (TN-21ZSW-526)

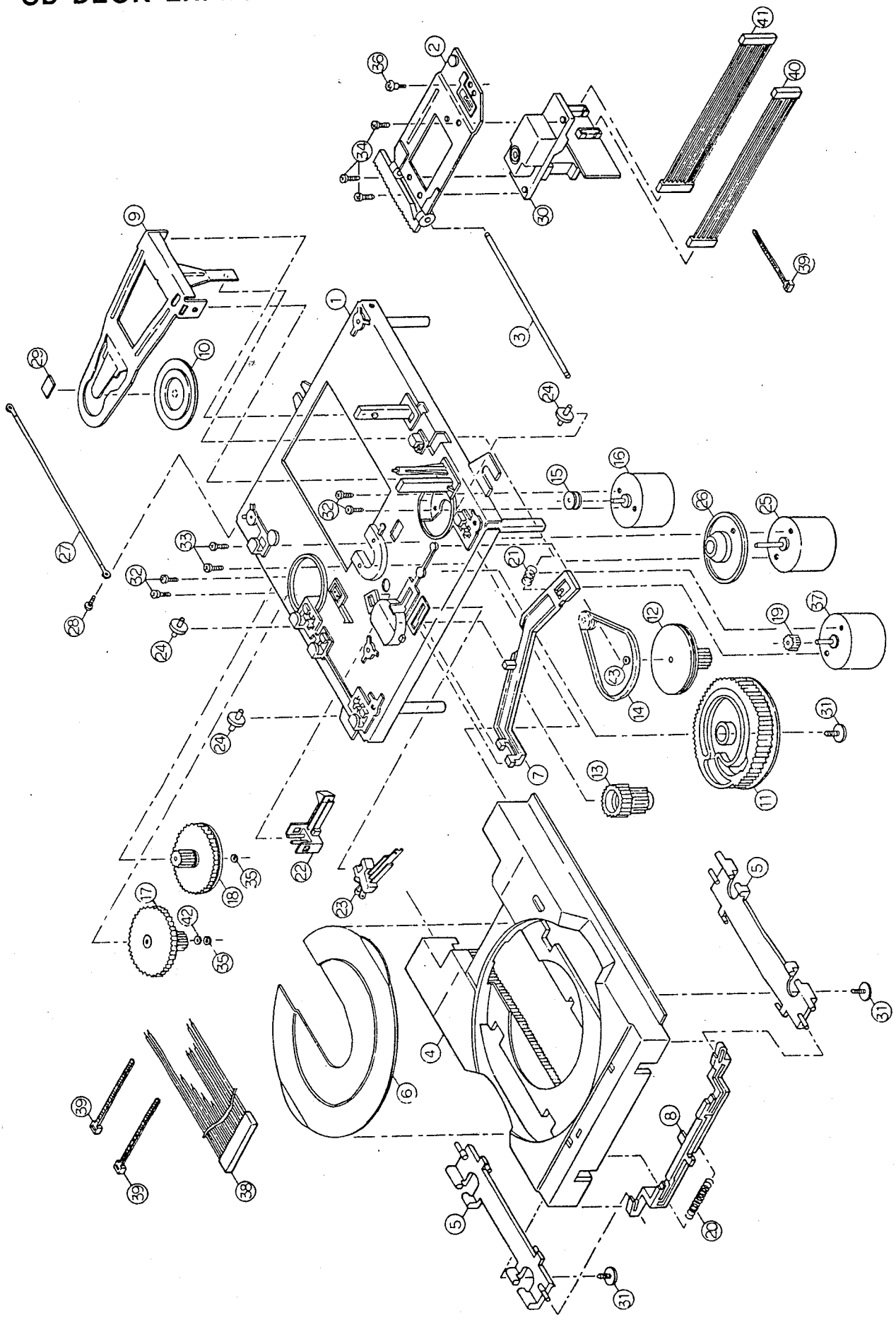


PARTS LIST (CASSETTE DECK EXPLODED VIEW)

NO.	PARTS NO.	DESCRIPTION	Q'TY
1	1921 14 301	BASE ASS'Y	2
2	1921 14 09	SWITCH ACTUATOR	2
3	1921 14 08	PUSH BUTTON ACTUATOR	2
4	1921 14 22	REC BUTTON LEVER	2
5	1921 14 23	PLAY BUTTON LEVER	2
6	1921 14 24	REW BUTTON LEVER	2
7	1921 14 25	FF BUTTON LEVER	2
8	1921 14 26	STOP BUTTON LEVER	2
9	1921 14 61	PAUSE BUTTON LEVER	2
10	1921 14 13A	P CONTROL SPRING	2
11	1921 14 55	PAUSE LEVER (E)	2
12	1921 14 12	PAUSE LEVER SPRING	2
13	1921 14 11	PAUSE STOPPER	2
14	1921 14 14	BUTTON LEVER SPRING (A)	2
15	1921 01 501	CHASSIS ASS'Y	2
16	1921 14 16	E ACTUATOR SPRING	2
17	1921 14 17	P.S. LEVER SPRING	2
18	1510 02 12	REC. SPRING PLATE	1
19	1821 01 159	E KICK LEVER	2
20	1921 14 20	PR STOPPER	2
21	1921 14 21	REC BUTTON LEVER SPRING	2
22	1921 14 15	BUTTON LEVER SPRING (B)	2
23	6401 01 149	LEAF SWITCH MSW-1541T	2
24			
25	1921 03 01	HEAD PANEL	1
26	1921 03 02	HEAD PANEL	1
27	1921 03 04	HEAD BASE	1
28	1921 03 06	HEAD BASE	1
29	1921 03 03	PANEL P SPRING	2
30	1921 14 18	M CONTROL SPRING	2
31			
32			
33	1821 03 08	EH SPRING	1
34	1821 03 07	AZIMUTH SPRING	2
35	1921 04 301	PINCH ROLLER ARM ASS'Y	2
36			
37			
38	1921 26 04	SENSING LEVER	2
39	1921 07 302	RF CLUTCH ASS'Y	2
40	1921 07 03	RF BELT	2
41			
42			
43	1921 09 304	FLYWHEEL ASS'Y	1
44	1921 09 303	FLYWHEEL ASS'Y	1
45	1921 26 05	GEAR PLATE SPRING	2
46	1921 26 501	GEAR PLATE ASS'Y	2
47	1921 26 02	CAM GEAR	2
48			
49	1821 10 70	FF GEAR	2
50	1829 10 10	BACK TENSION SPRING	2
51	1921 05 304	SUPPLY REEL ASS'Y	2

NO.	PARTS NO.	DESCRIPTION	Q'TY
52	1921 05 303	TAKE UP REEL ASS'Y	2
53	1921 05 06	SENSOR	2
54			
55	1921 12 11	MOTOR BRACKET	1
56	1820 13 06	MOTOR RUBBER	3
57	1821 12 02	MOTOR COLLAR SCREW	3
58	1921 12 05A	MOTOR PULLEY	1
59	1821 12 22	MAIN BELT	2
60	1921 12 12	ANTI VIBRATION FELT MAT	2
61			
62	1921 13 02	EJECT SLIDE LEVER	2
63			
64	1829 10 01	PACK SPRING	2
65	MS15P-AA0NI	P. HEAD	1
66	MS15R-AA2NI	R.P. HEAD	1
67	E-621MM0201	E. HEAD	1
68	SHU-21	MOTOR	1
69	1821 10 69	RECORD SAFETY LEVER	1
70			
71	9179 00 00	C TAPPING SCREW M2x3	3
72	9180 00 00	C TAPPING SCREW M2x4	6
73	9679 00 00	P TAPPING BING SCREW M2x5	4
74	9999 18 09	TAPPING SCREW M2x4.5	4
75	9004 00 00	SCREW M2x6	1
76	9821 00 00	⊕ ⊖ CAP SCREW M2x8	2
77	9115 00 00	⊕ BIND SCREW M2x3	2
78	9922 00 00	AZIMUTH SCREW M2x7	2
79	9182 00 00	C TAPPING SCREW M2x6	1
80			
81			
82			
83	9422 00 00	P WASHER CUT 1.2x3.8x0.3	2
84	9999 03 13	P WASHER CUT 1.45x3.8x0.5	2
85	9786 00 00	P WASHER 2x3.5x0.5	2
86			
87	1821 31 07	OPERATION LEVER	12
88	1821 31 06	BUTTON FRAME (S)	2
89	1829 31 03	BUTTON LEVER SHAFT	2
90	9999 14 02	S TAPPING SCREW M2x8 (GUIDE)	4
91	1921 12 09	P KICK LEVER (B)	1
92	1821 12 68	P KICK LEVER (A)	1
93	1821 12 23	PK COLLAR SCREW (A)	1
94	1821 12 65	COLLAR (B)	1
95	1821 12 25	P KICK LEVER SPRING	1
96		R/P HEAD MOTOR BRACKET	2
97	9999 20 18	PS SCREW 2x3.5	2
98	1921 14 37	P ARM COLLAR	2
99	1921 14 34	P ARM	2
100			

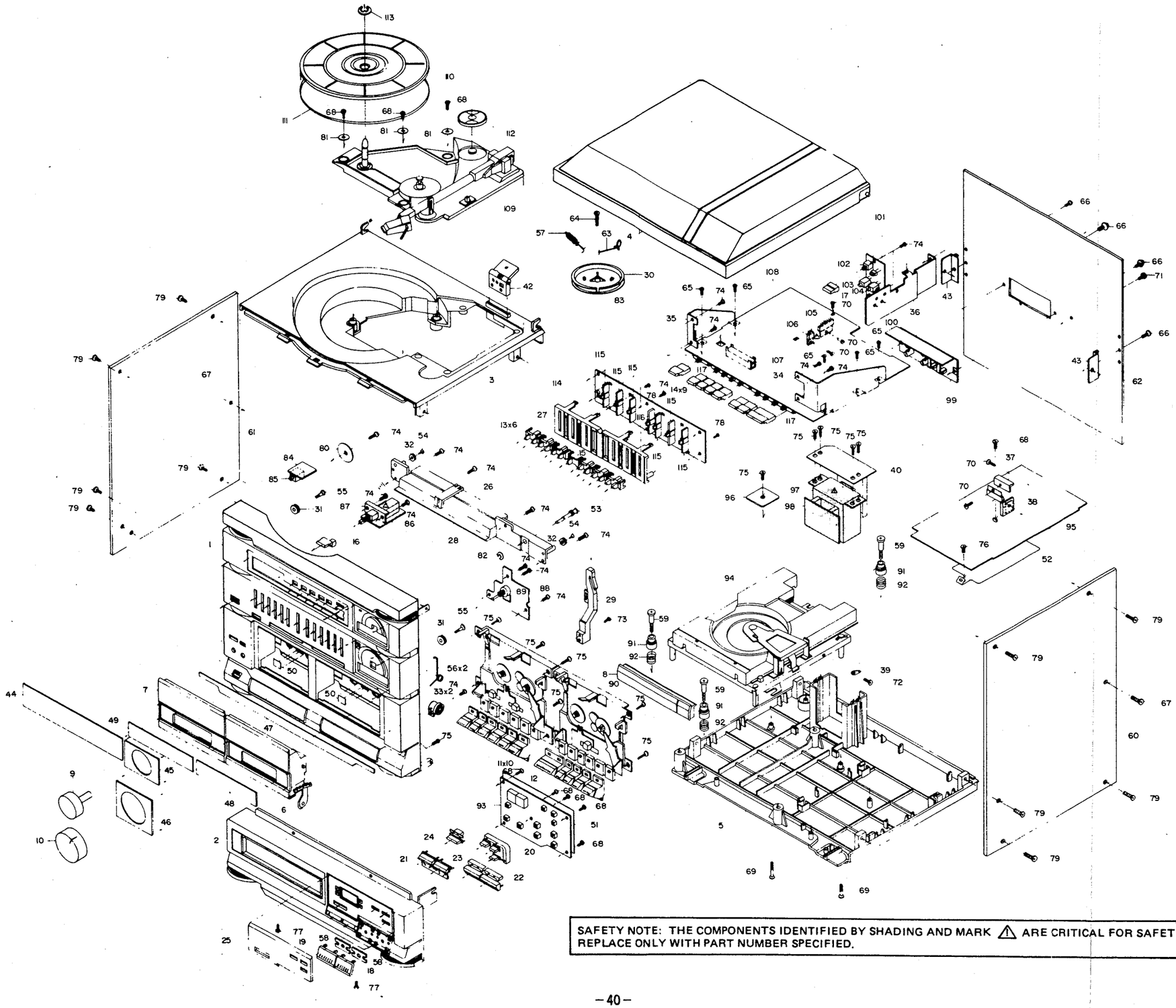
CD DECK EXPLODED VIEW



PARTS LIST(CD DECK EXPLODED VIEW)

NO.	PART NO.	DESCRIPTION	Q'TY
1	A81A117	CHASSIS ASSEMBLY 108	1
1-1	A81A118	CHASSIS G ASSEMBLY 108	–
1-1-1	A81P192	CHASSIS P108	–
1-2	A81H001	LOADING GEAR SHAFT-B	–
1-3	A81H002	PU SHAFT	–
1-4	A81H029	PU SHAFT-2	–
2	A81A003	PU BASE G ASSEMBLY	1
2-1	A81P002	PU BASE	–
3	A81H003	PU BASE SHAFT	1
4	A81G584	BOX D	1
5	A81G585	TABLE B	2
6	A81G586	DISC PLATE	1
7	A81G003	SLIDER	1
8	A81G507	LOCK LEVER	1
9	A81P004	CHUCK ARM	1
10	A81G004	DISC CLAMPER	1
11	A81G005	LOADING CAM	1
12	A81G006	LOADING GEAR A	1
13	A81G505	LOADING GEAR C	1
14	A81G070	LOADING BELT	1
15	A81G235	MOTOR PULLEY	1
16	M01T061	LOADING MOTOR (MT MDN4RB3SXA)	1
17	A81G008	PU GEAR A	1
18	A81G009	PU GEAR B	1
19	A81G010	MOTOR GEAR	1
20	A81S049	TABLE UP SPRING B	1
21	A81S002	CHUCK ARM SPRING	1
22	S01W050	LEAF SWITCH LSA-1121R1	1
23	S01W051	LEAF SWITCH LSC1223-38	1
24	A81G020	GUIDE ROLLER	3
25	M01T060	SPINDLE MOTOR (MT MDN4RB3LYAS)	1
26	A81G332	SPINDLE TABLE 108	1
27	A81G395	EARTH LEAD WIRE 410	(1)
28	M30T005	SCREW M3x5 S-TIGHT	(1)
29	A81P051	DISC GUARD	1
30	A81G447	OPTICAL PICK UP D-55D	1
31	A81H005	SCREW M3x8 ⊕ P-TIGHT	3
32	M20B003	SCREW M2x3 BIND	4
33	M20S006	SCREW M2x6 SEMS	2
34	M26S008	SCREW M2.6x8 SEMS	3
35	P16C325	POLY-WASHER (WITH CUTTING) 1.6x3.2x0.25	2
36	A81G234	PU ADJUSTING SCREW	1
37	M01T061	FEED MOTOR (MT MDN4RB3SXA)	1
38	A81G117	11 PIN CONNECTING WIRE	(1)
39	M01N035	NYLON BAND	(3)
40	A81G159	6 PIN CONNECTING WIRE	(1)
41	A81G161	8 PIN CONNECTING WIRE	(1)
42	P20W405	POLY-WASHER 2x4x0.5	1

CABINET EXPLODED VIEW



SAFETY NOTE: THE COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.

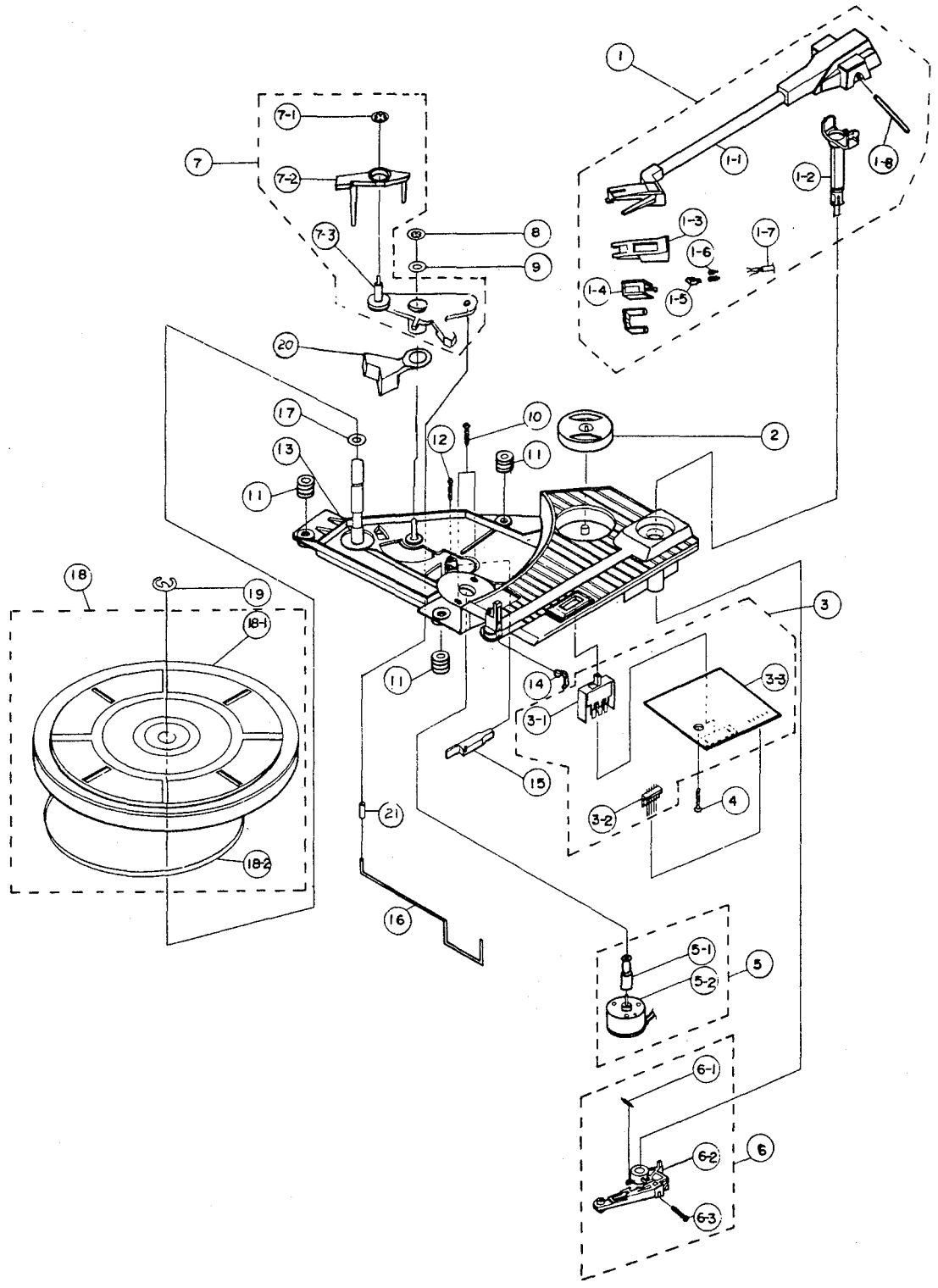
PARTS LIST(CABINET EXPLODED VIEW)

NO.	CODE NO.	DESCRIPTION	Q'TY
1	1B1022801	FRONT CABINET	1
2	1B1022901	CD FRONT CABINET	1
3	1B1023101	TOP COVER	1
4	1B2039501	DUST COVER	1
5	1B1023001	CD BOTTOM CABINET	1
6	1F2043001	DECK DOOR (R)	1
7	1F2039601	DECK DOOR (L)	1
8	1F3080101	CD DECK DOOR COVER	1
9	1I3079001	TUNING KNOB	1
10	1I3079101	VOLUME KNOB	1
11	1I3078101	DECK KNOB (A)	1
12	1I3078201	DECK KNOB (B)	1
13	1I3078301	E/Q KNOB	6
14	1I3078401	FUNCTION KNOB	9
15	1I3078801	BALANCE KNOB	1
16	1I4323001	POWER KNOB	1
17	1I4322801	BEAT KNOB	1
18	1I3080201	PLAY KNOB	1
19	1I3080201	STOP KNOB	1
20	1I3080501	CD CONTROL KNOB	1
21	1I3080601	CD FF, REW KNOB	1
22	1I3080301	SKIP KNOB (A)	1
23	1I3080401	SKIP KNOB (B)	1
24	1I4323201	OPEN CLOSE KNOB	1
25	1H3080901	CD CONTROL WINDOW	1
26	1J4323101	DIAL POINTER	1
27	1K3078901	E/Q CHISSIS	1
28	1K3079201	TUNING CHISSIS	1
29	1K4322901	REC. CHISSIS	1
30	1M3036301	DIAL DRUM	1
31	1M4180001	DIAL PULLEY (A)	2
32	1M4280901	DIAL PULLEY (E)	2
33	1M4237051	GEAR DAMPER	2
34	2B3079401	FRONT CHASSIS (R)	1
35	2B3079301	FRONT CHASSIS (L)	1
36	2B3079501	HEAT SINK	1
37	2B4344501	HEAT SINK (A)	1
38	2B4344601	HEAT SINK (B)	1
39	2K4180301	TERMINAL PLATE	3
40	2B3083601	P/T SHIELD COVER	1
41	2D4324301	INSU PLATE	1
42	2B3033801	HINGE ASS'Y	1
43	2B4335001	SIDE MOUNTING BRACKET	2
44	2D3079801	DIAL PLATE	1
45	2D4323601	TUNING PLATE	1
46	2D4323701	VOLUME PLATE	1
47	2D3079701	DECK FUNCTION PLATE	1
48	2D4323301	DECK DOOR WINDOW (R)	1
49	2D4325301	DECK DOOR WINDOW (L)	1
50	2D4323801	TAPE MIRROR	2
51	2B4344301	SHIELD PLATE (A)	1
52	2B4344401	SHIELD PLATE (B)	1

NO.	CODE NO.	DESCRIPTION	Q'TY
53	2E4323901	TUNING SHAFT	1
54	2E4224901	PULLEY SHAFT	2
55	2E4246901	PULLEY SHAFT (B)	2
56	2F4324001	DOOR SPRING	2
57	2F4104401	DIAL SPRING	1
58	2J4344201	TECT S/W CUSHION	2
59	2E4324101	CD DECK PIVOT SCREW	3
60	2L3081301	SIDE BOARD (R)	1
61	2L3081201	SIDE BOARD (L)	1
62	2L3081401	BACK BOARD	1
63	6A0001001	DIAL STRING	1450mm
64	4AF2615Y1	MACHINE SCREW FH M2.6x15	1
65	4AB3006Y1	MACHINE SCREW BH M3x6	5
66	4AW3008Y1	MACHINE SCREW PH/W M3x8	4
67	4A04010B1	MACHINE SCREW OVL M4x10	2
68	4CB3008Y1	TAPPING SCREW T2W BH ϕ3x8	9
69	4CB3017N1	TAPPING SCREW T2W BH ϕ3x17	2
70	4DB3008Y1	TAPPING SCREW T2 BH ϕ3x8	6
71	4DW3008Y1	TAPPING SCREW PH/W ϕ3x8	1
72	4GB3008Y1	TAPPING SCREW T/TITE "S" ϕ3x8	1
73	4GP2005Y1	TAPPING SCREW T/TITE "S" PH ϕ2x5	1
74	4CB3010Y1	TAPPING SCREW T2W BH ϕ3x10	19
75	4CB3012Y1	TAPPING SCREW T2W BH ϕ3x12	13
76	4CB3005Y1	TAPPING SCREW T2W BH ϕ3x5	1
77	4CF3012B1	TAPPING SCREW T2W FH ϕ3x12	2
78	4CB2006Y1	TAPPING SCREW T2W BH ϕ2x6	3
79	4B04016B1	TAPPING SCREW T2W OVL ϕ4x16	10
80	5A3223101	PLAIN WASHER	1
81	5A3210081	PLAIN WASHER	3
82	5K5011061	E-RING	1
83	2H4192211	FELT	1
84	–	HEADPHONE JACK PCB	1
85	S3B008001	HEADPHONE JACK	1
86	–	POWER SWITCH PCB	1
87	S2P110021	POWER SWITCH	1
88	–	VOLUME PCB	1
89	V2503A121	VOLUME	1
90	S80062001	CASSETTE DECK	1
91	–	RUBBER	1
92	–	DECK SPRING	1
93	S10045001	CD CONTROL PCB	1
94	S80064001	CD DECK	1
95	S11075001	CD MAIN PCB	1
96	–	AC CORD PCB	1
⚠97	P60VD0021	POWER TRANSFORMER	1
98	S12022001	POWER PCB	1
99	S3R041001	JACK BOARD	1
100	–	JACK PCB	1
101	–	MIC PCB	1
102	S2T220011	BEAT CUT SWITCH	1
103	S3H027001	MIC JACK (L)	1
104	S3H027001	MIC JACK (R)	1
105	I10220001	POWER IC	1
106	T414063Y1	TRANSISTOR	1
107	S2S620101	REC. SWITCH	1

NO.	CODE NO.	DESCRIPTION	Q'TY
108	S11074001	MAIN PCB	1
109	J00330001	TURNTABLE	1
111	–	BELT	1
112	–	E/P ADAPTER	1
113	–	E-RING	1
114	S10044001	E/Q PCB	1
115	V3503B071	G-EQ VOLUME	1
116	V3104W041	BALANCE VOLUME	1
117	S2B040361	BAND SWITCH	1

PLAYER EXPLODED VIEW (HT-861PC)



PARTS LIST(PLAYER EXPLODED VIEW)

NO.	CODE NO.	DESCRIPTION	Q'TY
1	—	TONE ARM ASS'Y	1
1-1	DA1020A3	ARM-TONE (ABS)	1
1-2	DH1290G7	HOLDER-ARM (ACETAL BK)	1
1-3	OG5014T3	CARTRIDGE (CP40S-30)	1
1-4	—	STYLUS	1
1-5	ET0260M3	TERMINAL-CLIP (2P)	1
1-6	—	TERMINAL-CLIP (1P)	2
1-7	LZ0003Z0	WIRE-TONE ARM (AWH2851 AWG32)	0.4
1-8	FS183008	PIN-PIVOT ASS'Y (φ2)	1
2	D00270A7	ADAPTOR-E, P (ABS, BK)	1
3	WP4211TS	PHONE P.C.B ASS'Y (HT-861)	1
3-1	SS0160S1	S/W-SLIDE (SKS2212)	1
3-2	—	WAFER	1
3-3	OP0512TS	PCB-PHONE (36x35x1.6t)	1
4	HB6081P2	SCREW-TAP PH (+2S-3x8)	1
5	—	MOTOR ASS'Y	1
5-1	DQ0130G3	PULLEY-MOTOR (ACETAL, WH)	1
5-2	JM0221M6	MOTOR (MM16S2RWH)	1
6	WA4095T1	FEED ARM ASS'Y (HT-765)	1
6-1	GS050007	SPRING-FEED ARM (STS)	1
6-2	DA0871G7	ARM-FEED (ACETAL)	1
6-3	HL6151P4	SCREW-TAP PH (+3S-3x15)	1
7	WA4113T4	CLUTCH GUIDE ASS'Y (HT-861)	1
7-1	IZ042001	WASHER-C.S (STSC)	1
7-2	DL0150G6	PLATE-CLUTCH (ACETAL)	1
7-3	DI0280G0	GUIDE-CLUTCH (ACETAL)	1
8	IZ042001	WASHER-C.S (STSC)	1
9	IC0320L0	WASHER-PLAIN (3.2x8 0.5)	1
10	HD5061W7	SCREW-WPH (+M2.6x6)	2
11	GC1030R6	CUSHION-BASE (NR BK)	3
12	HB3121P8	SCREW-TAP PH (+2S-2x12)	1
13	WA0632T3	CABINET ASS'Y (HT861)	1
14	FS167004	LOCKER ARM (ACETAL BK)	1
15	SL0011M8	S/W LEAF (MSW1466C)	1
16	GL033008	ACTUATOR (SUS)	1
17	IT0010Z5	WASHER-TEFRON	1
18	—	PLATTER ASS'Y	1
18-1	DU0230B2	PLATTER (HIPS BK)	1
18-2	GB0220R4	BELT (C BK)	1
19	IA060007	E-RING (φ6)	1
20	DL0480G3	LEVER-CLUTCH (ACETAL)	1
21	GH0070R8	STOPPER (NR)	1

ELECTRICAL PARTS LIST

(AUDIO SECTION)

SAFETY NOTE THE COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.

REF. NO.	CODE NO.	DESCRIPTION
CRITICAL COMPONENTS		
⚠ AC INPUT	WA2020091	2130±50, PLUG:KKP-419C WIRE:KLCE-2F AC POWER CORD
⚠ P/T	P60VD0021	60-70P-VF POWER TRANSFORMER
⚠ F501	F03150101	S51T3.15A 250V FUSE
⚠ R503	RF0020001	2.2 ohm, FUSE RESISTOR 1/2W PS
⚠ C508	S00047001/ S00048001	CS10-B2GA012M or DE7090B 102KV-1-KC AC LINE CAPACITOR 250V (0.001μF)
⚠ IC401	I10220001	TDA-2007 POWER AMP IC
⚠ TR501	T414063Y1/ T420583Y1	KTD-1406(Y), 2SD-2058(Y) TRANSISTOR
⚠ TR502	T322364Y1	KTC-2236(Y) TRANSISTOR
⚠ TR503	T109664Y1	KTA-966A(Y) TRANSISTOR
⚠ TR505	T414063Y1/ T420583Y1	KTD-1406(Y) or 2SD-2058(Y) TRANSISTOR
⚠ D501	D2012D001	DZ/UZ-12B ZENER DIODE
⚠ D502	D29.1D001	DZ/UZ-9.1B ZENER DIODE
⚠ D503	D00180001	FM 201 (2A, 100V) BRIDGE DIODE
⚠ D504	D00210001	AM 151 BRIDGE DIODE
⚠ D506,507	D2010D001	DZ/UZ 10.B ZENER DIODE
⚠ S12	S2P110021	SDLIP AQ101 POWER SWITCH
⚠ C507	CA4322001	2200μF 25V, ELECTROLYTIC CAPACITOR
FILTERS/IFT'S/COILS		
CF101	L40380001	BFCFL-455 AM IF FILTER
CF102	L40440001	SK107M2-AC-00 FM IF FILTER
T101	L1MO03501	35MO MW OSC COIL
T102	L1LO03401	34LO LW OSC COIL
T103	L1FA01001	10FA FM "A" IFT
T104	L1AA01501	15AA AM "A" IFT
T105	L1FD00801	08FD FM "D" IFT
L101	L1FR07701	77FR FM RF COIL
L102	L1FO017B1	17F0-B FM OSC COIL
L103,104	L1AT12601	126AT MW/LW BAR ANT COIL
L201	L1RO01101	11RO BIAS OSC COIL
L301	L1GC04901	49GC INDUCTOR COIL
BPF101	L1FT01001	10FT FM BPF COIL
SEMICONDUCTOR DEVICES		
IC101	I3008N001	KIA/TA-8167N FRONT END/IF/MPX IC
IC201	I6009P001	KIA/TA-7739P TAPE PLAY EQ IC
IC202	I6006N001	BA-3312N TAPE REC AMP IC
TR201,202	T318154R1	KTC-1815(GR) TRANSISTOR
TR203	T321204Y1	KTC-2120(Y) TRANSISTOR
TR204,205	T318154R1	KTC-1815(GR) TRANSISTOR
TR301,302,303,304	T318154R1	KTC-1815(GR) TRANSISTOR
TR504	T318154R1	KTC-1815(GR) TRANSISTOR
TR506	T105624Y1	KTA-562(Y) TRANSISTOR
TR507	T318154R1	KTC-1815(GR) TRANSISTOR
D101	D30010001	KDS2236 AFC DIODE
D201	D50010001	1N4148 SWITCHING DIODE

REF. NO.	CODE NO.	DESCRIPTION
D202	D10010001	1N4001 RECTIFIER DIODE
D505	D50010001	1N4148 SWITCHING DIODE
CAPACITORS		
C101	CC6CJ1011	100P BK, CERAMIC CAPACITOR DC50V
C102	CC6CD0301	3P CH, CERAMIC CAPACITOR DC50V
C103	CC6CD0701	7P CH, CERAMIC CAPACITOR DC50V
C104	CC6CJ3301	33P CH, CERAMIC CAPACITOR DC50V
C105	CC6RJ2201	22P RH, CERAMIC CAPCITOR DC50V
C106	CC6CJ1511	150P CH, CERAMIC CAPACITOR DC50V
C107	C360J3611	360P J STYROL DC50V
C108	C360J2711	270P J STYROL DC50V
C109	CC6CJ2201	22P CH, CERAMIC CAPACITOR DC50V
C110	CC6FZ2231	0.022μF FZ, CERAMIC CAPACITOR DC50V
C111	CC6CD0501	5P CH, CERAMIC CAPACITOR DC50V
C112	CC6RJ2401	24P RH, CERAMIC CAPACITOR DC50V
C113	CC6CJ2701	27P CH, CERAMIC CAPACITOR DC50V
C114	CA640.471	0.47μF 50V, ELECTROLYTIC CAPACITOR
C115	C16FZ2231	0.022μF FZ, CERAMIC CAPACITOR DC50V
C116	CC6BK1021	0.001μF BK, CERAMIC CAPACITOR DC50V
C117	CA6402.21	2.2μF 50V, ELECTROLYTIC CAPACITOR
C118	CA6403.31	3.3μF 50V, ELECTROLYTIC CAPACITOR
C119	CA640.331	0.33μF 50V, ELECTROLYTIC CAPACITOR
C120	CA6402.21	2.2μF 50V, ELECTROLYTIC CAPACITOR
C122	C360J1021	1000P J, STYROL CAPACITOR
C123,124	CC6FZ2231	0.022μF FZ, CERAMIC CAPACITOR DC50V
C125	CA3400101	10μF 16V, ELECTROLYTIC CAPACITOR
C126,127	CC6FZ2231	0.022μF FZ, CERAMIC CAPACITOR DC50V
C128,129	CE60J1531	0.015μF JK MYLAR CAPACITOR DC50V
C130,131	CA6404.71	4.7μF 50V, ELECTROLYTIC CAPACITOR
C132,133	CE60J2221	0.0022μF JK MYLAR CAPACITOR DC50V
C134	CA2400471	47μF 10V, ELECTROLYTIC CAPACITOR
C135,136	CC6FZ2231	0.022μF FZ, CERAMIC CAPACITOR DC50V
C201,202,203,204	CC6BK1021	0.001μF BK CERAMIC CAPACITOR DC50V
C205	CA2402201	220μF 10V ELECTROLYTIC CAPACITOR
C206	CC6BK1021	0.001μF BK, CERAMIC CAPACITOR DC50V
C207,208	CA2401001	100μF 10V ELECTROLYTIC CAPACITOR
C209,210	CE60J1531	0.015μF JK MYLAR CAPACITOR DC50V
C211,212	CE60J1031	0.01μF JK, MYLAR CAPACITOR DC50V
C213,214	CA6404.71	4.7μF 50V, ELECTROLYTIC CAPACITOR
C215	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
C217	CA3400221	22μF 16V, ELECTROLYTIC CAPACITOR
C218	CA3400101	10μF 16V, ELECTROLYTIC CAPACITOR
C219,220	CE60J1821	0.0018μF JK, MYLAR CAPACITOR DC50V
C221,222	CE60J3921	0.0039μF JK, MYLAR CAPACITOR DC50V
C223,224	CA6404.71	4.7μF 50V, ELECTROLYTIC CAPACITOR
C225,226	CA2401001	100μF 16V, ELECTROLYTIC CAPACITOR
C227,228	CA3400101	10μF 16V, ELECTROLYTIC CAPACITOR
C229	CA3400221	22μF 16V, ELECTROLYTIC CAPACITOR
C230	CA3400101	10μF 16V, ELECTROLYTIC CAPACITOR
C231,232	CA3401001	100μF 10V, ELECTROLYTIC CAPACITOR
C233	CE60J2221	0.0022μF JK, MYLAR CAPACITOR DC50V
C234	CE60J6821	0.0068μF JK, MYLAR CAPACITOR DC50V
C235	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
C236	CE60J2231	0.022μF JK, MYLAR CAPACITOR DC50V

REF. NO.	CODE NO.	DESCRIPTION
C237	CE60J3321	0.0033μF JK, MYLAR CAPACITOR DC50V
C238	CE60J1031	0.01μF JK, MYLAR CAPACITOR DC50V
C239	CA3401001	100μF 16V, ELECTROLYTIC CAPACITOR
C301,302	CC6CJ2201	22P CH, CERAMIC CAPACITOR DC50V
C303,304	CA640.471	0.47μF 50V, ELECTROLYTIC CAPACITOR
C305,306	CC6BK1011	100P BK, CERAMIC CAPACITOR DC50V
C307,308	CA6404.71	4.7μF 50V, ELECTROLYTIC CAPACITOR
C309,310	CE60J1831	0.018μF JK, MYLAR CAPACITOR DC50V
C311,312	CE60J3321	0.0033μF JK, MYLAR CAPACITOR DC50V
C313,314	CE60J1031	0.01μF JK, MYLAR CAPACITOR DC50V
C315,316	CE60J2231	0.022μF JK, MYLAR CAPACITOR DC50V
C317,318	CC6BK5611	560P BK, CARAMIC CAPACITOR DC50V
C319,320	CE60J2221	0.0022μF JK, MYLAR CAPACITOR DC50V
C321,322	CC6BK1011	100P BK, CERAMIC CAPACITOR DC50V
C323,324	CA6404.71	4.7μF 50V, ELECTROLYTIC CAPACITOR
C325,326	CA2400471	47μF 10V, ELECTROLYTIC CAPACITOR
C327	CC6FZ2231	0.022μF FZ, CERAMIC CAPACITOR DC50V
C328	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
C401,402	CA6402.21	2.2μF 50V, ELECTROLYTIC CAPACITOR
C403,404	CC6BK1021	0.001μF BK, CERAMIC CAPACITOR DC50V
C405,406	CA2402201	220μF 10V, ELECTROLYTIC CAPACITOR
C407	CA4400221	22μF 25V, ELECTROLYTIC CAPACITOR
C409,410	CA3304701	470μF 16V, ELECTROLYTIC CAPACITOR
C411,412	C260J1541	0.15μF JK, MYLAR CAPACITOR DC50V
C501,502	CA3401001	100μF 16V ELECTROLYTIC CAPACITOR
C503	CA3401001	100μF 10V ELECTROLYTIC CAPACITOR
C504	CA3402201	220μF 16V ELECTROLYTIC CAPACITOR
C505,506	CC6FZ2231	0.022μF FZ, CERAMIC CAPACITOR DC50V
C509,510	CC6FZ2231	0.022μF FZ, CERAMIC CAPACITOR DC50V
C511	CA6404.71	4.7μF 50V, ELECTROLYTIC CAPACITOR
C512	CA3400101	10μF 16V, ELECTROLYTIC CAPACITOR
C513	CA4304701	470μF 25V, ELECTROLYTIC CAPACITOR
RESISTORS		
R101,102	RC22154J1	150K ohm, CARBON RESISTOR 1/8W
R103	RC22100J1	10 ohm, CARBON RESISTOR 1/8W
R104	RC32470J1	47 ohm, CARBON RESISTOR 1/4W
R105,106	RC22104J1	100K ohm, CARBON RESISTOR 1/8W
R107	RC22102J1	1K ohm, CARBON RESISTOR 1/8W
R108	RC22103J1	10K ohm, CARBON RESISTOR 1/8W
R109,110	RC22222J1	2.2K ohm, CARBON RESISTOR 1/8W
R111	RC22101J1	100 ohm, CARBON RESISTOR 1/8W
R112	RC22471J1	470 ohm, CARBON RESISTOR 1/8W
R113	RC22682J1	6.8K ohm, CARBON RESISTOR 1/8W
R114	RC32222J1	2.2K ohm, CARBON RESISTOR 1/4W
R115	RC31222J1	2.2K ohm, CARBON RESISTOR 1/4W
R116,117	RC22183J1	18K ohm, CARBON RESISTOR 1/8W
R118	RC32272J1	2.7K ohm, CARBON RESISTOR 1/4W
R119	RC32221J1	220 ohm, CARBON RESISTOR 1/4W
R120	RC32330J1	33 ohm, CARBON RESISTOR 1/4W
R201	RC22103J1	10K ohm, CARBON RESISTOR 1/8W
R202	RC22473J1	47K ohm, CARBON RESISTOR 1/8W
R203	RC22750J1	75 ohm, CARBON RESISTOR 1/8W
R204	RC22152J1	1.5K ohm, CARBON RESISTOR 1/8W
R205,206	RC22224J1	220K ohm, CARBON RESISTOR 1/8W

REF. NO.	CODE NO.	DESCRIPTION
R207,208	RC22822J1	8.2K ohm, CARBON RESISTOR 1/8W
R209,210,211,212	RC22222J1	2.2K ohm, CARBON RESISTOR 1/8W
R213,214	RC22223J1	22K ohm, CARBON RESISTOR 1/8W
R215,216	RC22103J1	10K ohm, CARBON RESISTOR 1/8W
R217,218	RC22223J1	22K ohm, CARBON RESISTOR 1/8W
R219,220	RC32473J1	47K ohm, CARBON RESISTOR 1/4W
R221,222	RC22183J1	18K ohm, CARBON RESISTOR 1/8W
R223,224	RC22332J1	3.3K ohm, CARBON RESISTOR 1/8W
R225	RC22222J1	2.2K ohm, CARBON RESISTOR 1/8W
R226	RC32222J1	2.2K ohm, CARBON RESISTOR 1/4W
R227,228	RC22181J1	180 ohm, CARBON RESISTOR 1/8W
R231	RC22274J1	270K ohm, CARBON RESISTOR 1/8W
R232	RC32221J1	220 ohm, CARBON RESISTOR 1/4W
R233	RC32223J1	22K ohm, CARBON RESISTOR 1/4W
R234	RC22473J1	47K ohm, CARBON RESISTOR 1/8W
R235	RC22103J1	10K ohm, CARBON RESISTOR 1/8W
R236	RC22104J1	100K ohm, CARBON RESISTOR 1/8W
R237	RC22333J1	33K ohm, CARBON RESISTOR 1/8W
R238	RC32472J1	4.7K ohm, CARBON RESISTOR 1/4W
R239	RC32561J1	560 ohm, CARBON RESISTOR 1/4W
R240	RC32680J1	68 ohm, CARBON RESISTOR 1/4W
R241	RC22562J1	5.6K ohm, CARBON RESISTOR 1/4W
R242	RC3282GJ1	8.2 ohm, CARBON RESISTOR 1/4W
R243	RC22473J1	47K ohm, CARBON RESISTOR 1/8W
R244	RC22223J1	22K ohm, CARBON RESISTOR 1/8W
R245,246	RC22104J1	100K ohm, CARBON RESISTOR 1/8W
R247	RC22152J1	1.5K ohm, CARBON RESISTOR 1/8W
R248	RC22472J1	4.7K ohm, CARBON RESISTOR 1/8W
R249	RC22103J1	10K ohm, CARBON RESISTOR 1/8W
R301,302	RC22334J1	330K ohm, CARBON RESISTOR 1/8W
R303,304	RC22273J1	27K ohm, CARBON RESISTOR 1/8W
R307,308	RC22473J1	47K ohm, CARBON RESISTOR 1/8W
R309,310	RC22184J1	180K ohm, CARBON RESISTOR 1/8W
R313,314	RC22224J1	220K ohm, CARBON RESISTOR 1/8W
R315,316	RC22102J1	1K ohm, CARBON RESISTOR 1/8W
R317,318	RC22104J1	100K ohm, CARBON RESISTOR 1/8W
R319,320	RC22271J1	270 ohm, CARBON RESISTOR 1/8W
R321	RC22102J1	1K ohm, CARBON RESISTOR 1/8W
R322,323	RC22473J1	47K ohm, CARBON RESISTOR 1/8W
R325,326	RC22183J1	18K ohm, CARBON RESISTOR 1/8W
R327,328	RC22103J1	10K ohm, CARBON RESISTOR 1/8W
R329,330	RC22223J1	22K ohm, CARBON RESISTOR 1/8W
R331,332,333,334	RC22682J1	6.8K ohm, CARBON RESISTOR 1/8W
R335,336	RC22104J1	100K ohm, CARBON RESISTOR 1/8W
R337,338	RC22562J1	5.6K ohm, CARBON RESISTOR 1/8W
R339,340,341,342	RC22472J1	4.7K ohm, CARBON RESISTOR 1/8W
R343,344	RC22122J1	1.2K ohm, CARBON RESISTOR 1/8W
R345,346	RC22224J1	220K ohm, CARBON RESISTOR 1/8W
R347,348	RC22473J1	47K ohm, CARBON RESISTOR 1/8W
R349,350	RC22562J1	5.6K ohm, CARBON RESISTOR 1/8W
R351,352	RC22471J1	470 ohm, CARBON RESISTOR 1/8W
R353,354	RC22222J1	2.2K ohm, CARBON RESISTOR 1/8W
R355,356	RC22122J1	1.2K ohm, CARBON RESISTOR 1/8W
R401,402	RC22150J1	15 ohm, CARBON RESISTOR 1/8W
R403,404	RC22152J1	1.5K ohm, CARBON RESISTOR 1/8W

REF. NO.	CODE NO.	DESCRIPTION
R405,406	RC2210GJ1	1 ohm, CARBON RESISTOR 1/8W
R407,408	RC21181J1	180 ohm, CARBON RESISTOR 1/8W
R409,410	RC22103J1	10K ohm, CARBON RESISTOR 1/8W
R501	RC22561J1	560 ohm, CARBON RESISTOR 1/8W
R502	RC22102J1	1K ohm, CARBON RESISTOR 1/8W
R504	RC22681J1	680 ohm, CARBON RESISTOR 1/8W
R505	RC22103J1	10K ohm, CARBON RESISTOR 1/8W
R507,508	RC22104J1	100K ohm, CARBON RESISTOR 1/8W
R509,510	RC22103J1	10K ohm, CARBON RESISTOR 1/8W
R511	RC22681J1	680 ohm, CARBON RESISTOR 1/8W
SEMIFIXED RESISTORS/SWITCHES		
SVR101	V6203B061/ V6203B171	H0811A 20KB or RV083H 20KB SEMI VARIABLE RESISTOR
SVR201	V6101B041/ V6101B031	H0811A 100B or RV083H 100B SEMI VARIABLE RESISTOR
SVR202	V6502B051/ V6502B081	H0811A 5K.B or RV083H 5KB SEMI VARIABLE RESISTOR
VR301,302,303,304, 305,306	V3503B071/ V3503B081	S202GNA-50K.B or SV2021P-11C1, 4E B50K SLIDE VOLUME
VR307	V3104W041/ V3104W051	S-202GNA-100K.W or SV2021P-11C1, 4E W100K SLIDE VOLUME
VR308	V2503A121	K162P00-50KAx2 ROTARY VOLUME
S1-4	S2B040361	TR23246169 BAND SWITCH
S5-8	S2B040351	TR23244085 FUNCTION SWITCH
S9	S2S620101	00620434N R/P SWITCH
S10	S2P420131	TR23214154 H.S. DUBBING SWITCH
S11	S2T220011	JIP-2281A BEAT CUT SWITCH
MISCELLANEOUS		
JK4	S3R041001	SE-5068-4 JACK BOARD
JK301,302	S3H027001	EJ-3505 MIC JACK
JK401	S3B008001	HSJ0924-01-040 HEADPHONE JACK
TURNTABLE	J00330001/ J00300001	HT-861 or HP-H7 TURNTABLE ASS'Y
TC1,2	B40210001	CVCN06D500 TRIMMER CAPACITOR
PVC	B20490002	PVC22KT-LD1 (R11-5033) POLY VARICON
DECK	S80062001	TN-21ZSW-526 DECK MECHANISM
PCB	S11074001	OAK-FR-1 242.5x246.4x1.6t MAIN P.C. BOARD ASS'Y
	S12022001	OAK-FR-1 97x76x1.6t/2 POWER P.C. BOARD ASS'Y
	S10044001	OAK-FR-1 191x76.5x1.6t/3 VOLUME P.C. BOARD ASS'Y
FUSE CLIP	S60003001	FC-5A FUSE CLIP

ELECTRICAL PARTS LIST

(CD SECTION)

SAFETY NOTE: THE COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ARE CRITICAL FOR SAFETY REPLACE ONLY WITH PART NUMBER SPECIFIED.

REF. NO.	CODE NO.	DESCRIPTION
SEMICONDUCTOR DEVICES		
IC100	IE002NM01	LA9200N ASP IC
IC200	IF005NM01	LC7860NM DSP IC
IC300	IJ003RM01	LC3517RM-15 S-RAM IC
IC400	IG0030001	LC7880 D/A CONVERTER IC
IC500	I00450001	CDH-2002 C.P.U IC
IC600,601	IK0040001	LA6510 OP-AMP IC
IC602	IK0090001	LA6500 OP-AMP IC
IC700,701	IK0030001	MC4558 OP-AMP IC
IC800	IL0050001	MC7805 REGULATOR IC
Q201	T107334Y1	KSA733C-Y TRANSISTOR
Q601	T010064Y1	KSR1006-Y TRANSISTOR
Q602	T309454Y1	KSC945C-Y TRANSISTOR
Q701,702,703,704	T309454Y1	KSC945C-Y TRANSISTOR
Q801	T309454Y1	KSC945C-Y TRANSISTOR
Q802	T107334Y1	KSA733C-Y TRANSISTOR
Q803	T109284Y1	KSA928A-Y TRANSISTOR
Q804	T107334Y1	KSA733C-Y TRANSISTOR
Q805	T309454Y1	KSC945C-Y TRANSISTOR
VD201	D30090001	SVC211SP VARICAP DIODE
D501,502,503,504	D50020001	1N4148M SWITCHING DIODE
D515	D50020001	1N4148M SWITCHING DIODE
D601	D50020001	1N4148M SWITCHING DIODE
D801,802	D50020001	1N4148M SWITCHING DIODE
ZD701	D24.7Z001	ZD-4.7BM ZENER DIODE
ZD801,802	D27.5Z001	ZD-7.5BM ZENER DIODE
ZD803	D25.6Z001	ZD-5.6BM ZENER DIODE
ZD804	D27.5Z001	ZD-7.5BM ZENER DIODE
FILTER/COIL		
T101	L40680001	02LF FILTER
T201	L1TO05901	59TO OSC ADJ COIL
RESISTORS		
R101	RC22753J1	75K ohm, J CARBON RESISTOR 1/8W PS
R102	RC22224J1	220K ohm, J CARBON RESISTOR 1/8W PS
R103	RC22104J1	100K ohm, J CARBON RESISTOR 1/8W PS
R104	RC22102J1	1K ohm, J CARBON RESISTOR 1/8W PS
R105	RC22271J1	270 ohm, J CARBON RESISTOR 1/8W PS
R106	RC22472J1	4.7K ohm, J CARBON RESISTOR 1/8W PS
R107	RC22333J1	33K ohm, J CARBON RESISTOR 1/8W PS
R108	RC22223J1	22K ohm, J CARBON RESISTOR 1/8W PS
R109	RC32103J1	10K ohm, J CARBON RESISTOR 1/4W PS
R110	RC22334J1	330K ohm, J CARBON RESISTOR 1/8W PS
R111	RC32472J1	4.7K ohm, J CARBON RESISTOR 1/4W PS
R112	RC22154J1	150K ohm, J CARBON RESISTOR 1/8W PS
R113	RC22391J1	390 ohm, J CARBON RESISTOR 1/8W PS
R114	RC22223J1	22K ohm, J CARBON RESISTOR 1/8W PS
R115	RC22103J1	10K ohm, J CARBON RESISTOR 1/8W PS
R116,117	RC22104J1	100K ohm, J CARBON RESISTOR 1/8W PS
R118	RC32222J1	2.2K ohm, J CARBON RESISTOR 1/4W PS

REF. NO.	CODE NO.	DESCRIPTION
R119	RC22472J1	4.7K ohm, J CARBON RESISTOR 1/8W PS
R120	RC22223J1	22K ohm, J CARBON RESISTOR 1/8W PS
R121	RC22561J1	560K ohm, J CARBON RESISTOR 1/8W PS
R122	RC32222J1	2.2K ohm, J CARBON RESISTOR 1/4W PS
R123	RC32221J1	220 ohm, J CARBON RESISTOR 1/4W PS
R124	RC22472J1	4.7K ohm, J CARBON RESISTOR 1/8W PS
R125	RC22332J1	3.3K ohm, J CARBON RESISTOR 1/8W PS
R126	RC22222J1	2.2K ohm, J CARBON RESISTOR 1/8W PS
R127	RC22823J1	82K ohm, J CARBON RESISTOR 1/8W PS
R128	RC22913J1	91K ohm, J CARBON RESISTOR 1/8W PS
R129	RC22824J1	820K ohm, J CARBON RESISTOR 1/8W PS
R130	RC22562J1	5.6K ohm, J CARBON RESISTOR 1/8W PS
R131	RC22303J1	30K ohm, J CARBON RESISTOR 1/8W PS
R132	RC22102J1	1K ohm, J CARBON RESISTOR 1/8W PS
R133	RC22103J1	10K ohm, J CARBON RESISTOR 1/8W PS
R134,135	RC22104J1	100K ohm, J CARBON RESISTOR 1/8W PS
R201	RC22223J1	22K ohm, J CARBON RESISTOR 1/8W PS
R202	RC22152J1	1.5K ohm, J CARBON RESISTOR 1/8W PS
R203	RC32104J1	100K ohm, J CARBON RESISTOR 1/8W PS
R204	RC22103J1	10K ohm, J CARBON RESISTOR 1/8W PS
R205,206,207,208,209	RC22102J1	1K ohm, J CARBON RESISTOR 1/8W PS
R210	RC22103J1	10K ohm, J CARBON RESISTOR 1/8W PS
R212	RC22104J1	100K ohm, J CARBON RESISTOR 1/8W PS
R213	RC22683J1	68K ohm, J CARBON RESISTOR 1/8W PS
R501	RC22102J1	1K ohm, J CARBON RESISTOR 1/8W PS
R502,503,504,505, 506,507,508,509, 510,511,512	RC22103J1	10K ohm, J CARBON RESISTOR 1/8W PS
R513,514	RC22393J1	39K ohm, J CARBON RESISTOR 1/8W PS
R515,516,517,518, 519,520,521	RC22181J1	180 ohm, J CARBON RESISTOR 1/8W PS
R522	RC22222J1	2.2K ohm, J CARBON RESISTOR 1/8W PS
R528	RC22274J1	270K ohm, J CARBON RESISTOR 1/8W PS
R529	RC32103J1	10K ohm, J CARBON RESISTOR 1/4W PS
R601	RC2222GJ1	2.2 ohm, J CARBON RESISTOR 1/8W PS
R602	RC2247GJ1	4.7 ohm, J CARBON RESISTOR 1/8W PS
R603	RC22224J1	220K ohm, J CARBON RESISTOR 1/8W PS
R604	RC22153J1	15K ohm, J CARBON RESISTOR 1/8W PS
R605	RC22273J1	27K ohm, J CARBON RESISTOR 1/8W PS
R606	RC22223J1	22K ohm, J CARBON RESISTOR 1/8W PS
R607	RC22224J1	220K ohm, J CARBON RESISTOR 1/8W PS
R608	RC22223J1	22K ohm, J CARBON RESISTOR 1/8W PS
R609	RC2222GJ1	2.2 ohm, J CARBON RESISTOR 1/8W PS
R610	RC2247GJ1	4.7 ohm, J CARBON RESISTOR 1/8W PS
R611	RC22153J1	15K ohm, J CARBON RESISTOR 1/8W PS
R612	RC22561J1	560 ohm, J CARBON RESISTOR 1/8W PS
R613	RC2222GJ1	2.2 ohm, J CARBON RESISTOR 1/8W PS
R614	RC2247GJ1	4.7 ohm, J CARBON RESISTOR 1/8W PS
R615	RC22103J1	10K ohm, J CARBON RESISTOR 1/8W PS
R616	RC22473J1	47K ohm, J CARBON RESISTOR 1/8W PS
R617	RC22102J1	1K ohm, J CARBON RESISTOR 1/8W PS
R618	RC2222GJ1	2.2 ohm, J CARBON RESISTOR 1/8W PS
R619	RC22564J1	560K ohm, J CARBON RESISTOR 1/8W PS
R620	RC22474J1	470K ohm, J CARBON RESISTOR 1/8W PS
R621	RC22333J1	33K ohm, J CARBON RESISTOR 1/8W PS
R622	RC22102J1	1K ohm, J CARBON RESISTOR 1/8W PS

REF. NO.	CODE NO.	DESCRIPTION
R623	RC22103J1	10K ohm, J CARBON RESISTOR 1/8W PS
R624	RC22183J1	18K ohm, J CARBON RESISTOR 1/8W PS
R625	RC2222GJ1	2.2 ohm, J CARBON RESISTOR 1/8W PS
R627	RC2247GJ1	4.7 ohm, J CARBON RESISTOR 1/8W PS
R628	RC22223J1	22K ohm, J CARBON RESISTOR 1/8W PS
R629	RC22103J1	10K ohm, J CARBON RESISTOR 1/8W PS
R630	RC22105J1	1M ohm, J CARBON RESISTOR 1/8W PS
R631	RC22103J1	10K ohm, J CARBON RESISTOR 1/8W PS
R632	RC22222J1	2.2K ohm, J CARBON RESISTOR 1/8W PS
R633	RC22183J1	18K ohm, J CARBON RESISTOR 1/8W PS
R634	RC2247GJ1	4.7 ohm, J CARBON RESISTOR 1/8W PS
R635,636	RC22473J1	47K ohm, J CARBON RESISTOR 1/8W PS
R637	RC22332J1	3.3K ohm, J CARBON RESISTOR 1/8W PS
R701,702	RC22103J1	10K ohm, J CARBON RESISTOR 1/8W PS
R703	RC22221J1	220 ohm, J CARBON RESISTOR 1/8W PS
R704,705	RC22472J1	4.7K ohm, J CARBON RESISTOR 1/8W PS
R706,707	RC22104J1	100K ohm, J CARBON RESISTOR 1/8W PS
R708,709	RC22181J1	180 ohm, J CARBON RESISTOR 1/8W PS
R710	RC22102J1	1K ohm, J CARBON RESISTOR 1/8W PS
R711,712	RC22471J1	470 ohm, J CARBON RESISTOR 1/8W PS
R713	RC22561J1	560 ohm, J CARBON RESISTOR 1/8W PS
R714	RC22472J1	4.7K ohm, J CARBON RESISTOR 1/8W PS
R715	RC22102J1	1K ohm, J CARBON RESISTOR 1/8W PS
R716	RC22471J1	470 ohm, J CARBON RESISTOR 1/8W PS
R717	RC22561J1	560 ohm, J CARBON RESISTOR 1/8W PS
R718	RC22472J1	4.7K ohm, J CARBON RESISTOR 1/8W PS
R719,720,721	RC22471J1	470 ohm, J CARBON RESISTOR 1/8W PS
R722,723	RC22472J1	4.7K ohm, J CARBON RESISTOR 1/8W PS
R724,725	RC22223J1	22K ohm, J CARBON RESISTOR 1/8W PS
R801	RC22681J1	680 ohm,, J CARBON RESISTOR 1/8W PS
R802	RC22221J1	220 ohm, J CARBON RESISTOR 1/8W PS
R803	RC22104J1	100K ohm, J CARBON RESISTOR 1/8W PS
R804	RC22471J1	470 ohm, J CARBON RESISTOR 1/8W PS
R805	RC22101J1	100 ohm, J CARBON RESISTOR 1/8W PS
R806	RC22223J1	22K ohm, J CARBON RESISTOR 1/8W PS
R807,808	RC22221J1	220 ohm, J CARBON RESISTOR 1/8W PS
R809	RC22474J1	470K ohm, J CARBON RESISTOR 1/8W PS
R810	RC22223J1	22K ohm, J CARBON RESISTOR 1/8W PS
R811	RC22473J1	47K ohm, J CARBON RESISTOR 1/8W PS
R812	RC22333J1	33K ohm, J CARBON RESISTOR 1/8W PS
CAPACITORS		
C101	CC6CJ4701	47PF CH, CERAMIC CAPACITOR 50V
C102	CE80J1041	0.1μF, J MYLAR CAPACITOR DC100V
C103	CC6FZ1021	0.001μF FZ, CERAMIC CAPACITOR 50V
C104	C280J1241	0.12μF, J MYLAR CAPACITOR DC100V
C105	CP6400011	1μF 50V, ELECTROLYTIC CAPACITOR (N.P)
C106	C280J2741	0.27μF, J MYLAR CAPACITOR DC100V (METALIZE)
C107	CE80J4731	0.047μF, J MYLAR CAPACITOR DC100V
C108	CE80J6821	0.0068μF, J MYLAR CAPACITOR DC100V
C109	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
C110	CE80J1021	0.001μF, J MYLAR CAPACITOR DC100V
C111	CE80J1041	0.1μF, J MYLAR CAPACITOR DC100V
C112	C360J3311	330PF, STYROL CAPACITOR 50V
C113	CE80J3321	0.0033μF, J MYLAR CAPACITOR DC100V

REF. NO.	CODE NO.	DESCRIPTION
C114	CC6BK2211	220PF BK, CERAMIC CAPACITOR 50V
C115,116	CC6CJ1211	120PF CH, CERAMIC CAPACITOR 50V
C117	CC6BK1221	0.0012μF BK, CERAMIC CAPACITOR 50V
C118	CA2400101	10μF 10V, ELECTROLYTIC CAPACITOR
C119	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
C120	CA2400471	47μF 10V, ELECTROLYTIC CAPACITOR
C121	CC6CJ4701	47PF CH, CERAMIC CAPACITOR 50V
C122	CA3400471	47μF 16V, ELECTROLYTIC CAPACITOR
C123	CA2400471	47μF 10V, ELECTROLYTIC CAPACITOR
C201	CE80J1031	0.01μF, J MYLAR CAPACITOR DC100V
C202	CE80J4731	0.047μF, J MYLAR CAPACITOR DC100V
C203,204	CC6CJ3001	30PF CH, CERAMIC CAPACITOR 50V
C205	CC6FZ1031	0.01μF FZ, CERAMIC CAPACITOR 50V
C206	CA2400101	10μF 10V, ELECTROLYTIC CAPACITOR
C207,208	CC6CJ8201	82PF CH, CERAMIC CAPACITOR 50V
C209	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
C501	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
C503	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
C601	CC6KJ1041	0.1μF SL, CERAMIC CAPACITOR 50V
C602	CC6CJ1801	18PF CH, CERAMIC CAPACITOR 50V
C603	CE80J1041	0.1μF, J MYLAR CAPACITOR DC100V
C604	CC6BK4711	470PF BK, CERAMIC CAPACITOR 50V
C605	CC6KJ1041	0.1μF SL, CERAMIC CAPACITOR 50V
C606	CE80J8231	0.082μF, J MYLAR CAPACITOR DC100V
C607	CE80J2221	0.0022μF, J MYLAR CAPACITOR DC100V
C608	C280J8241	0.82μF, J MYLAR CAPACITOR DC100V (METALIZE)
C609	CC6KJ1041	0.1μF SL, CERAMIC CAPACITOR 50V
C610,611	CE80J1231	0.012μF, J MYLAR CAPACITOR DC100V
C612	CE80J4731	0.047μF, J MYLAR CAPACITOR DC100V
C613	CC6KJ1041	0.1μF SL, CERAMIC CAPACITOR 50V
C614	CA6402.21	2.2μF 50V, ELECTROLYTIC CAPACITOR
C615	CA1402201	220μF 6.3V, ELECTROLYTIC CAPACITOR
C616	CA6402.21	2.2μF 50V, ELECTROLYTIC CAPACITOR
C617	CC6KJ1041	0.1μF SL, CERAMIC CAPACITOR 50V
C701	CC6FZ4731	0.047μF FZ, CERAMIC CAPACITOR 50V
C702	CE80J1041	0.1μF, J MYLAR CAPACITOR DC100V
C703	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
C704,705	CE80J6831	0.068μF, J MYLAR CAPACITOR DC100V
C706,707	CE80J1531	0.015μF, J MYLAR CAPACITOR DC100V
C708,709	CE80J2221	0.0022μF, J MYLAR CAPACITOR DC100V
C710,711	CC6CJ0501	5PF CH, CERAMIC CAPACITOR 50V
C712,713	CA2400101	10μF 10V, ELECTROLYTIC CAPACITOR
C714,715	CE80J6821	0.0068μF, J MYLAR CAPACITOR DC100V
C801	CA3404701	470μF 16V, ELECTROLYTIC CAPACITOR
C802	CA3401001	100μF 16V, ELECTROLYTIC CAPACITOR
C803	CC6FZ4731	0.047μF FZ, CERAMIC CAPACITOR 50V
C804,805	CA2402201	220μF 10V, ELECTROLYTIC CAPACITOR
C806	CA3404701	470μF 16V, ELECTROLYTIC CAPACITOR
C807	CA3401001	100μF 16V, ELECTROLYTIC CAPACITOR
C808,809	CC6FZ4731	0.047μF FZ, CERAMIC CAPACITOR 50V
C810,811	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
C812	CC6FZ1031	0.01μF FZ, CERAMIC CAPACITOR 50V
C813	CA2402201	220μF 10V, ELECTROLYTIC CAPACITOR
C814	CA6403.31	3.3μF 50V, ELECTROLYTIC CAPACITOR
C815	CA6400011	1μF 50V, ELECTROLYTIC CAPACITOR

REF. NO.	CODE NO.	DESCRIPTION
SEMIFIXED RESISTORS		
SVR101	V6103B141	RH0615C-10KB SEMIFIXED RESISTOR
SVR102,103	V6473B011	RH0615C-47KB SEMIFIXED RESISTOR
SVR104	V6104B011	RH0615C-100KB SEMIFIXED RESISTOR
SVR105	V6103B141	RH0615C-10KB SEMIFIXED RESISTOR
MISCELLANEOUS		
DECK	S80064001	TCD-8D5 DECK MECHANISM
X201	S00039001	8.6436MHz CRYSTAL UNIT
P.C. BOARD	S11075001	237x120x1.6t MAIN P.C. BOARD
CD CONTROL		
DISPLAY	D60630001	ELD-323P LED DISPLAY
LD501,502,503,504	D60640001	EL-583HD LED LAMP
S501,502,503,504, 505,506,507,508, 509,510	S2T120021	JTP-1232A TACTILE SWITCH
Q501,502,503,504, 505	T107334Y1	KSA733C-Y TRANSISTOR
D505,506,507,508, 509,510,511,512, 513,514	D50020001	1N4148M SWITCHING DIODE
R523,524,525,526, 527	RC22472J1	4.7K ohm, J CARBON RESISTOR 1/8W PS
C502	CA2401001	100μF 10V, ELECTROLYTIC CAPACITOR
P.C. BOARD	S10045001	249x161.5x1.6t CONTROL P.C. BOARD

SERVICE MANUAL AMENDMENT

COMPO-85A

PLEASE ATTACH THIS AMENDMENT TO THE TENSAI SERVICE MANUAL.

VALID FROM S/NO. 007008321 - 007009089
008011161 - 008011920
012012681 - 012013440

MODIFICATION NOTICE NO. 23

TENSAI

COMPACT SYSTEM

COMPO-85A

Date MAY 1991 Issued by G. BENNETT

THE FOLLOWING CORRECTIONS SHOULD BE MADE IN THE SERVICE MANUALS AND THE PARTS (PRICE) LISTS.

		Section	Key No.	Part No.	Description	Q'ty	Remark	Reason
1	From		94	S80064001	CD-DECK	1		B
	To		94	S80073001	CD-DECK	1		
2	From		95	S11075001-O	CD-PCB MAIN	1		B
	To		95	S11075001-N	CD-PCB MAIN	1		
3	From							
	To							

PLEASE REFER TO ATTACHED SERVICE MANUAL AMENDMENT.

~~XXXXXXXXXXXXXXX~~ NOT INTERCHANGEABLE	Serial No. Chassis No.	Effective from
Q'ty of initial production before modification.	Identification of modified unit.	

REASON FOR MODIFICATION
A ..... Standardization C ..... Improvement of reliability E ..... Miss print G .....
B ..... Change of materials D ..... Improvement of performance F ..... Miss register

TENSAI INTERNATIONAL, A.H. GUGGENHEIM SA
SERVICE DEPT. ZOLLFREILAGER, CH-4023 BASEL/SWITZERLAND

ELECTRICAL PARTS LIST

(CD SECTION)

SAFETY NOTE. THE COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ARE CRITICAL FOR SAFETY REPLACE ONLY WITH PART NUMBER SPECIFIED.

REF. NO.	CODE NO.	DESCRIPTION
CRITICAL COMPONENTS		
⚠ IC800	IL00500O1	MC7805 IC REGULATOR
⚠ Q801	T309454Y1	KSC945C-Y TRANSISTOR TAPING
⚠ Q802	T107334Y1	KSA733C-Y TRANSISTOR TAPING
⚠ Q803	T109284Y1	KSA928A-Y TRANSISTOR TAPING
⚠ ZD801, 802	D27.5Z001	ZD-7.5B DIODE ZENER
⚠ ZD803	D25,6Z001	ZD-5.6B DIODE ZENER
SEMICONDUCTOR DEVICES		
[MAIN]		
IC100	IE002NM01	LA9200NM IC ASP
IC200	IF005NM01	LC 7860NM IC DSP
IC300	IJ003RM01	LC3517RM-15 IC S-RAM
IC400	IG005N001	KDA0316N IC DAC
IC500	IH0050001	CDH2002 IC CPU
IC600, 601	IK0040001	LA6510 IC OP-AMP (IC600 W/HEAT SINK)
IC602	IK0090001	LA6500 IC OP-AMP
IC700, 701	IK0030001	MC4558 IC OP-AMP
Q201, 506, 804	T107334Y1	KSA733C-Y TRANSISTOR TAPING
Q601	T010064Y1	KSR1006-Y TRANSISTOR TAPING
Q602, 701–704, 805	T309454Y1	KSC945C-Y TRANSISTOR TAPING
VD201	D30090001	SVC211SP DIODE VARICAP
D501–504, 515, 601 801, 802	D50020001	IN4148M DIODE SWITCHING
ZD701	D24.7Z001	ZD-4.7B DIODE ZENER
ZD804	D27.5Z001	ZD-7.5B DIODE ZENER
[CONTROL]		
LED DISPLAY	D60630001	ELD-323P LED DISPLAY
LD501–504	D60640001	EL-583HD LED LAMP
Q501–505	T107334Y1	KSA733C-Y TRANSISTOR TAPING
D505–514	D50020001	IN4148M DIODE SWITCHING
FILTER/COILS		
X201	S00039001	8.6436MHz CRYSTAL UNIT
T101	L40680001	02LF FILTER COIL
T201	L1TO05901	59TO COIL OSC ADJ
SEMIFIXED VOLUMES/SWITCHES		
[MAIN]		
SVR101, 105	V6103B141	RH0615C-10KB SEMIFIXED VOLUME
SVR102, 103	V6473B011	RH0615C-47KB SEMIFIXED VOLUME
SVR104	V6104B011	RH0615C-100KB SEMIFIXED VOLUME
[CONTROL]		
S501–510	S2T120021	JTP-1232A SWITCH TACT

REF. NO.	CODE NO.	DESCRIPTION
MISCELLANEOUS		
DECK	S80073001	TCD-8SF CD DECK MECHANISM
PCB	S11075001	237x120x1.6t P.C. BOARD MAIN
	S10045001	249x161.5x1.6t P.C. BOARD CONTROL
RESISTORS		
[MAIN]		
R601, 609, 618, 613, 625	RC2222GJ1	2.2 OHM, J R: CARBON 1/8W TAPING
R602, 610, 614, 627, 634	RC2247GJ1	4.7 OHM, J R: CARBON 1/8W TAPING
R805, 113	RC22101J1	100 OHM, J R: CARBON 1/8W TAPING
R708, 709, 515, 516, 517, 518, 519 520, 521	RC22181J1	180 OHM, J R: CARBON 1/8W TAPING
R802, 807, 808, 703	RC22221J1	220 OHM, J R: CARBON 1/8W TAPING
R105	RC22271J1	270 OHM, J R: CARBON 1/8W TAPING
R711, 712, 716, 719, 720, 721, 804 612	RC22471J1	470 OHM, J R: CARBON 1/8W TAPING
R121, 713, 717	RC22561J1	560 OHM, J R: CARBON 1/8W TAPING
R801	RC22681J1	680 OHM, J R: CARBON 1/8W TAPING
R205, 206, 207, 208, 209 (132 BULK) 530, 617, 622, 710, 715, 104	RC22102J1	1K OHM, J R: CARBON 1/8W TAPING
R202	RC22152J1	1.5K OHM, J R: CARBON 1/8W TAPING
R126, 522, 632	RC22222J1	2.2K OHM, J R: CARBON 1/8W TAPING
R125, 637	RC22332J1	3.3K OHM, J R: CARBON 1/8W TAPING
R106, 119, 124, 704, 705, 714, 718 722, 723, 606	RC22472J1	4.7K OHM, J R: CARBON 1/8W TAPING
R512, 115, 204, 210, 502, 503, 504, 505, 506, 507, 508, 509, 510 511, 615, 629, 631, 701, 702 624 (529 BULK)	RC22103J1	10K OHM, J R: CARBON 1/8W TAPING
R130	RC22562J1	5.6K OHM, J R: CARBON 1/8W TAPING
R623	RC22123J1	12K OHM, J R: CARBON 1/8W TAPING
R633	RC22183J1	18K OHM, J R: CARBON 1/8W TAPING
R108, 114, 120, 201, 608, 628 724, 725, 806, 810, 133, 611	RC22223J1	22K OHM, J R: CARBON 1/8W TAPING
R604, 107	RC22273J1	27K OHM, J R: CARBON 1/8W TAPING
R131	RC22303J1	30K OHM, J R: CARBON 1/8W TAPING
R812, 621, 136, 112	RC22333J1	33K OHM, J R: CARBON 1/8W TAPING
R513, 514, 640	RC22393J1	39K OHM, J R: CARBON 1/8W TAPING
R616, 635, 636, 811	RC22473J1	47K OHM, J R: CARBON 1/8W TAPING
R101	RC22753J1	75K OHM, J R: CARBON 1/8W TAPING
R127	RC22823J1	82K OHM, J R: CARBON 1/8W TAPING
R128	RC22913J1	91K OHM, J R: CARBON 1/8W TAPING
R103, 116, 117, 134, 212, 803, 706, 707	RC22104J1	100K OHM, J R: CARBON 1/8W TAPING
R213	RC22154J1	150K OHM, J R: CARBON 1/8W TAPING
R102	RC22224J1	220K OHM, J R: CARBON 1/8W TAPING
R528, 639, 603, 607	RC22274J1	270K OHM, J R: CARBON 1/8W TAPING
R110, 620	RC22334J1	330K OHM, J R: CARBON 1/8W TAPING
R809	RC22474J1	470K OHM, J R: CARBON 1/8W TAPING
R135	RC22124J1	120K OHM, J R: CARBON 1/8W TAPING

REF. NO.	CODE NO.	DESCRIPTION
R619	RC22564J1	560K OHM, J R: CARBON 1/8W TAPING
R129	RC22824J1	820K OHM, J R: CARBON 1/8W TAPING
R630	RC22105J1	1M OHM, J R: CARBON 1/4W TAPING
R123	RC32221J1	220 OHM, J R: CARBON 1/4W TAPING
R122	RC32222J1	2.2K OHM, J R: CARBON 1/4W TAPING
R531	RC32103J1	10K OHM, J R: CARBON 1/4W TAPING
R203	RC32104J1	100K OHM, J R: CARBON 1/4W TAPING
R118	RC31222J1	2.2K OHM, J R: CARBON 1/4W
R111	RC31472J1	4.7K OHM, J R: CARBON 1/4W
R109	RC31103J1	10K OHM, J R: CARBON 1/4W
[CONTROL]		
R523–527	RC22472J1	4.7K OHM, J R: CARBON 1/8W TAPING
CAPACITORS		
C710, 711 (502 BULK)	CC6CJ0501	5P CH, J C: CERAMIC (50V) TAPING
C203, 204	CC6CJ3001	30PF CH, J C: CERAMIC (50V) TAPING
C101, 121	CC6CJ4701	47PF CH, J C: CERAMIC (50V) TAPING
C207 (208 BULK)	CC6CJ8201	82PF CH, J C: CERAMIC (50V) TAPING
C115, 116	CC6CJ1211	120PF CH, J C: CERAMIC (50V) TAPING
C114	CC6BK2211	220PF B, K C: CERAMIC (50V) TAPING
C620	CC6BK4711	470PF B, K C: CERAMIC (50V) TAPING
C103	CC6FZ1021	0.001UF F, Z C: CERAMIC (50V) TAPING
C117	CC6BK1221	0.0012UF B, K C: CERAMIC (50V) TAPING
C205, 812	CC6FZ1031	0.01UF F, Z C: CERAMIC (50V) TAPING
C701, 809 (210, 803, 808 BULK)	CC6FZ4731	0.047UF F, Z C: CERAMIC (50V) TAPING
C601, 605, 609, 613, 617	CC6FZ1041	0.1UF F, Z C: CERAMIC (50V) TAPING
C112	C360J3311	330PF C: STYROL (50V)
C621	C16CJ6801	68PF, CH, J C: CERAMIC (50V)
C604	CC6CJ2201	22P CH, J C: CERAMIC (50V) TAPING
(C110 BULK)	C280J1021	0.001UF, J C: MYLAR (100V)
C607, 708 (709 BULK)	CE80J2221	0.0022UF, J C: MYLAR (100V) TAPING
(C113 BULK)	C280J3321	0.0033UF, J C: MYLAR (100V)
C108, 714, 715	CE80J6821	0.0068UF, J C: MYLAR (100V) TAPING
C201	CE80J1031	0.01UF, J, K C: MYLAR (100V) TAPING
C611 (610 BULK)	CE80J1231	0.012UF, J C: MYLAR (100V) TAPING
C706, 707	CE80J1531	0.015UF, J C: MYLAR (100V) TAPING
C107, 202, 612	CE80J4731	0.047UF, J C: MYLAR (100V) TAPING
C704, 705	CE80J6831	0.068UF, J C: MYLAR (100V) TAPING
C102, 111, 603, 702 (606 BULK)	CE80J1041	0.1UF, J C: MYLAR (100V) TAPING
C104	C280J1241	0.12UF, J C: MYLAR (100V) MINI
C106	C280J3341	0.33UF, J C: MYLAR (100V)
C608	C280J8241	0.82UF, J C: MYLAR (100V)
C815, 619	CA6400011	1UF 5x11 C: ELEC (50V) TAPING
C614, 616	CA6402.21	2.2UF 5x11 C: ELEC (50V) TAPING
C814	CA6403.31	3.3UF 5x11 C: ELEC (50V) TAPING
C118, 206, 712, 713	CA2400101	10UF 6.3x11 C: ELEC (10V) TAPING
C120	CA2400471	47UF 6x11 C: ELEC (10V) TAPING
C122	CA3400471	47UF 5x11 C: ELEC (16V) TAPING
C109, 119, 209, 503, 703, 810, 501 (811 BULK)	CA2401001	100UF 6.3x11.5 C: ELEC (10V) TAPING
C802, 807	CA3401001	100UF 8x11.5 C: ELEC (16V) TAPING
C805, 804, 813	CA2402201	220UF 8x11.5 C: ELEC (10V) TAPING

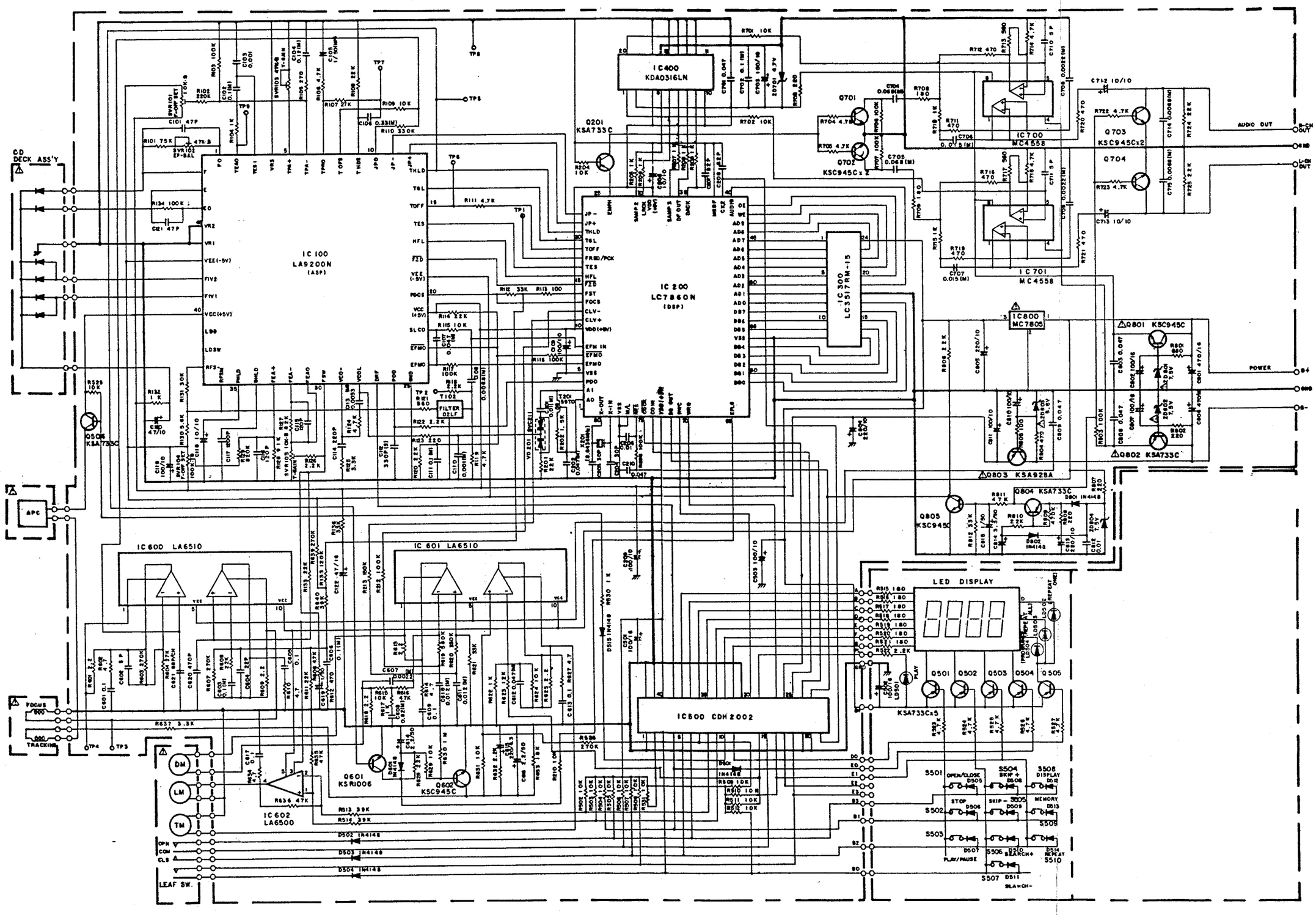
REF. NO.	CODE NO.	DESCRIPTION
C615	CA1402201	220UF 6 3x11 C: ELEC (6,3V) TAPING
C801, 806	CA3404701	470UF 10x12.5 C: ELEC (16V) TAPING
C105	CP6400011	1UF 6x11 C: ELEC (50V) TAP N.P
[CONTROL]		
C502	CA2301001	100UF 6.3x11.5 C: ELEC (10V)

PARTS LIST (CD DECK EXPLODED VIEW)

NO.	PART NO.	DESCRIPTION	Q'TY
1	A81A237	CHASSIS AS900	1
1-1	A81A166	CHASSIS GAS-C	1
1-1-1	A81P271	CHASSIS P-C	1
1-2	A81H001	LOADING GEAR B SHAFT	1
1-3	A81H002	PU SHAFT	1
2	A81A228	PU CHASSIS 900AS	1
2-1	A81P390	PU CHASSIS 900	1
2-2	A81H104	N GEAR SHAFT	1
3	A81H106	P SLIDE SHAFT B	2
4	A81G584	BOX D	1
5	A81G585	TABLE B	2
6	A81G586	DISC PLATE	1
7	A81G003	SLIDER	1
8	A81G507	LOCK LEVER-C	1
9	A81P004	CHUCK ARM	1
10	A81G004	DISC CLAMPER	1
11	A81G005	LOADING CAM	1
12	A81G006	LOADING GEAR A	1
13	A81G505	LOADING GEAR C	1
14	A81H105	MOTOR PULLEY 8800	1
15	M01T061	LOADING MOTOR (MT MDN4RB3SxA)	1
16	A81G225	WORM FOIL	1
17			1
18	A81A075	FEED MOTOR CAS	1
18-1	M01T052	MT PPN13MK03A	1
18-2	A81G226	WORM GEAR	1
19	A81S049	TABLE UP SPRING B	1
20	A81S002	CHUCK ARM SPRING	1
21	S01W051	LEAF SWITCH LSC122338	1
22	A81G020	GUIDE ROLLER	3
23	M01T060	SPINDLE MOTOR (MT MDN4RB3LYAS)	1
24	A81G751	SPINDLE TABLE 900	1
25			
26			
27			
28	A81G993	PICK-UP SF90APC	1
29	A81H005	M3x8 (+)FLAT TIGHT (LOADING CAM BOX)	3
30	M20B003	M2x3 BIND SCREW (LOADING SPINDLE MT)	4
31	S20N003	M2x3 BIND MECHINE SCREW (FEED MT)	2
32	S17N006	M1.7x6 BIND SCREW (LIMIT SWITCH)	1
33	P16C325	POLY-WASHER (WITH CUTTING) 1.6x3.2x0.25 (WORM FOIL)	1
34	S01W065	LIMIT SWITCH MSS-3	1
35	M26H006	M2.6x6 TAP (SLIDE SHAFT)	2
36	B26T004	M2.6x4 BIND TAP	1
37	A81S050	SHAFT WASHER ISP	1
38	A81G070	LOADING BELT	1
39			
40			

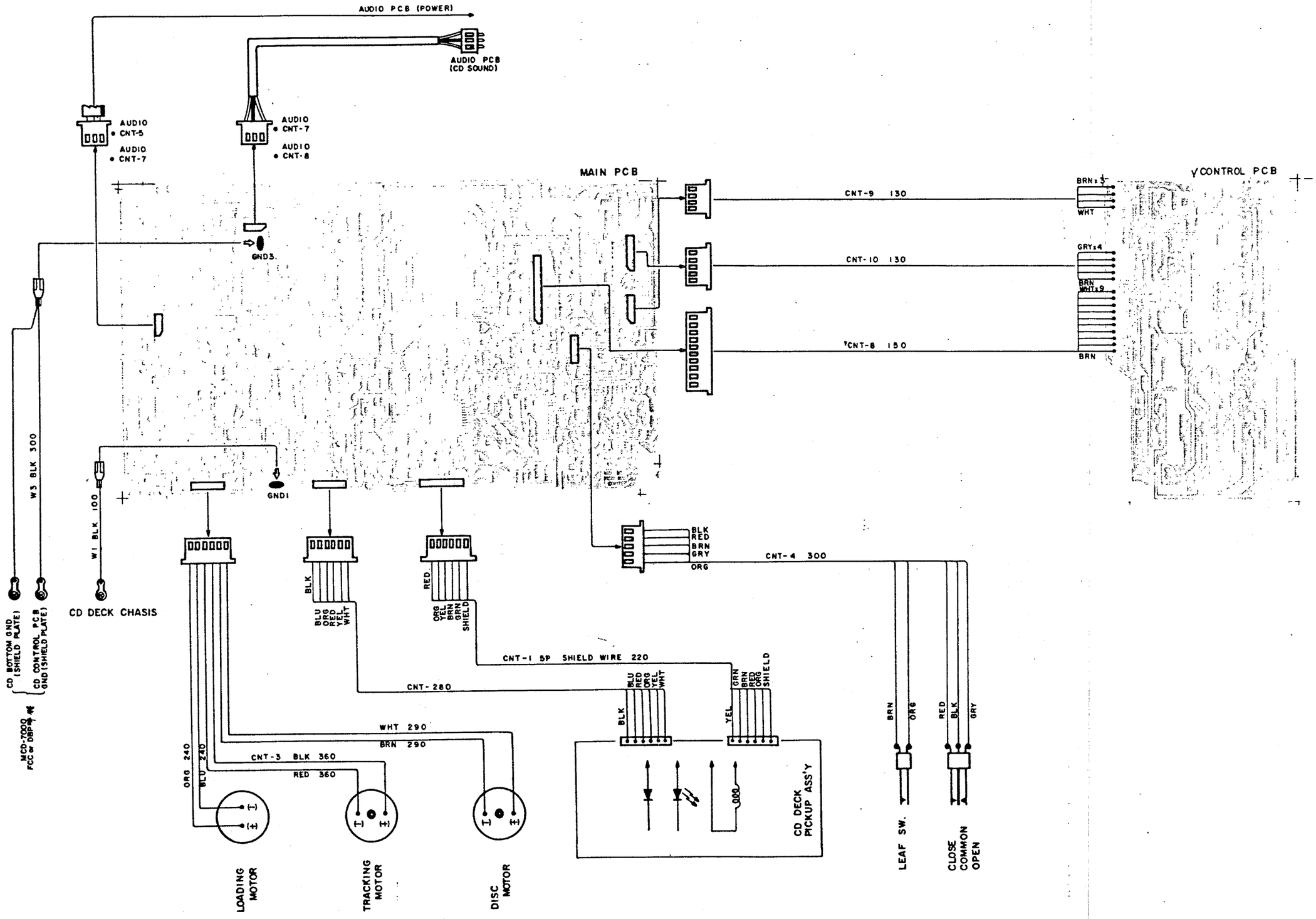
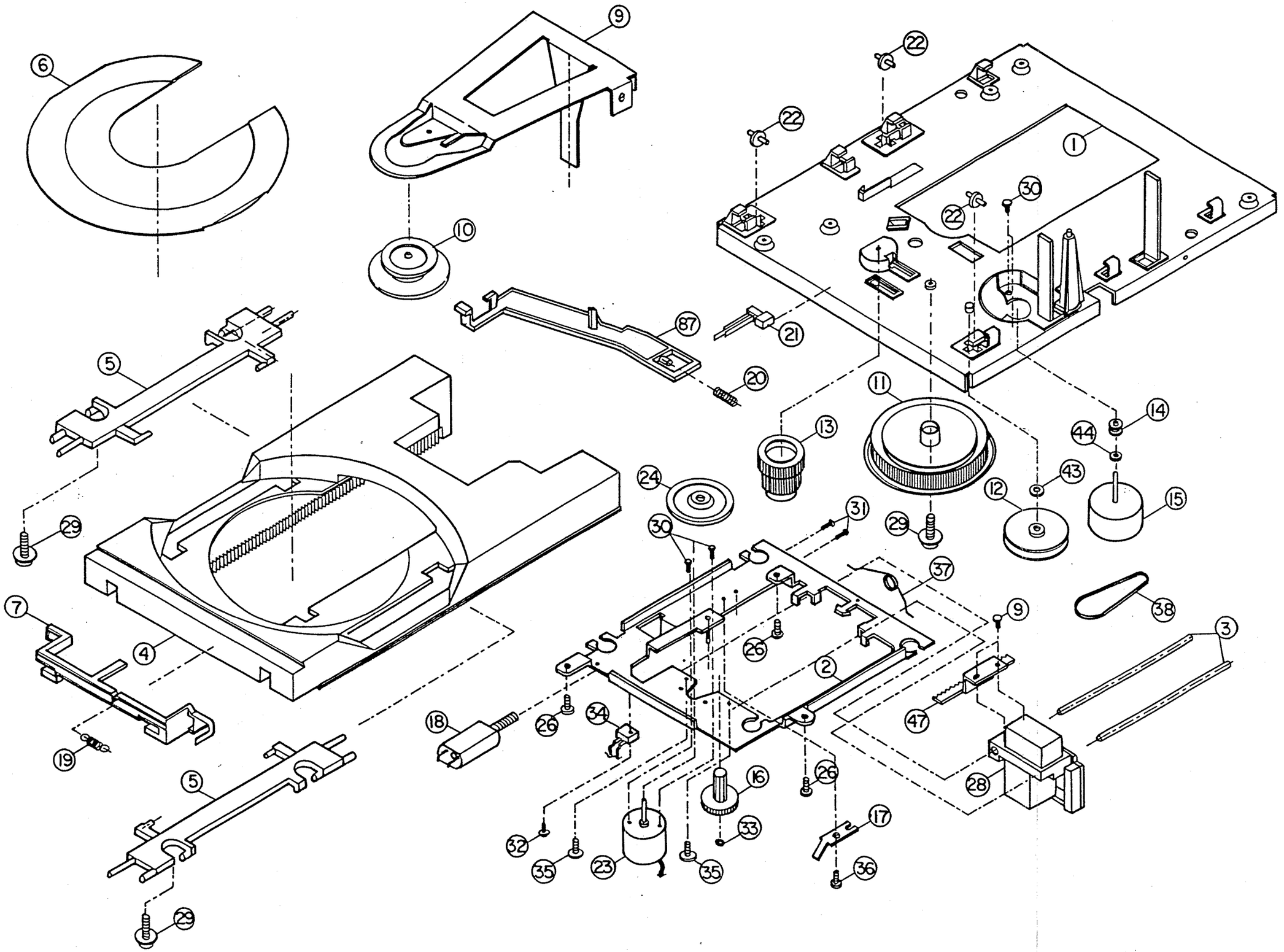
NO.	PART NO.	DESCRIPTION	Q'TY
41			
42			
43	P21W413	POLY WASHER 1.7x4x0.13 (LOADING GEAR A)	1
44	B22G029	UP FLAT WASHER (MOTOR PULLEY)	1
45			
46	P30T108	M3x8 P TITE	1
47	A81G878	LOCKER GEAR SF	1
48	M20S006	M2x6 SCREW SEMS (LOCK)	2

SCHEMATIC DIAGRAM (CD SECTION)



SAFETY NOTE: THE COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.

WIRING DIAGRAM (CD SECTION)



MCD-7000/7001 CD DECK EXPLODED VIEW.